



Approved FY 2023 Budgets  
Section V: CAPITAL PROGRAMS



Potomac Pump Station

(\$ in thousands)

FY 2021 Actual	FY 2022 - 2031 CIP Disbursement Plan											Lifetime Budget
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-yr Total	
\$371,518	\$567,507	\$647,004	\$668,633	\$619,913	\$735,924	\$822,910	\$783,185	\$669,154	\$496,528	\$409,140	\$6,419,899	\$13,377,458



DC Water Headquarters



Bryant Street Pump Station



Blue Plains

## Overview

DC Water’s Capital Improvement Program (CIP) supports the continuation of major capital asset investment in programs and projects that will upgrade the water distribution and sewer system as well as maintain compliance with federal mandates, and improve the efficiency of operations. The CIP includes all mandated projects, rehabilitation of assets required to meet permit and other regulatory requirements, and projects to meet the immediate needs necessary to maintain existing service levels.

The CIP is presented on two different basis; the ten-year disbursement plan and lifetime budget.

- Ten-Year Disbursement Plan** – This category represents the actual cash disbursements “cash out of the door” for each project, excluding contingencies. It provides a more realistic approach and basis for forecasting the anticipated level of rate increases, as well as, timing for pursuing capital financing. In addition, the ten-year disbursement plan includes projected completion dates, program management, and in-house labor costs.
- Lifetime Budget** – The “lifetime” budget, reflects historical spending prior to, during, and beyond the current ten-year period, including in-house labor. Lifetime budgets represent projects active during the ten-year period, and are the primary area of focus in budget development and day-to-day monitoring. In addition to “active” projects, the lifetime budget includes projects for which all activities have been completed during the previous fiscal year and are listed as “closed” in the CIP. Closed projects are dropped from the CIP in the next fiscal year, and new projects are continuously added, as needed, each fiscal year.

Detailed information on the projects can be found online at [www.dcwater.com](http://www.dcwater.com)

## CIP Development and Approval Process

DC Water’s capital budget review process begins each year in the spring. The Department of CIP Infrastructure Management, working with the Engineering Cluster, conducts a review of major accomplishments, priorities, status of major projects, and emerging regulatory and related issues impacting the capital program. The review process is a collaborative effort and involves departments with responsibility for managing the operations of DC Water services and capital projects; staff from the department of Finance; and members of the Senior Executive Team. The CIP is integrated into DC Water’s ten-year financial plan; and is the primary driver of DC Water’s projected rate increases over the ten-year planning period.

The CIP review process spans over several months and culminates with the presentation of the CIP to DC Water’s Board of Directors’ Environmental Quality and Operations; Finance and Budget; and DC Retail Water and Sewer Rates Committees in January. The operating budgets, capital improvement program, and ten-year financial plan were adopted by the full Board on March 3, 2022.

After adoption by the Board of Directors, DC Water is required to submit its annual operating and ten-year capital budgets to the Mayor and the District of Columbia Council for review and comment. However, neither has the power to change DC Water’s annual budgets. The District of Columbia includes DC Water’s budgets in their submission to Congress.

## Capital Authority Request

Capital authority represents the amount of Congressionally-authorized funding that DC Water can use to administer its capital program. Sufficient authority is required to be in place prior to contracts being executed. Actual commitments within the service areas may vary up or down for a particular year. However, they are “not to exceed the total” FY 2022 – FY 2031 capital authority request in the amount of \$5.9 billion.

It should be noted that the execution of contracts require the approval of the CEO and General Manager, as Contracting Officer, or his delegee. Major projects and contracts valued at \$1 million or more, require DC Water Board approval.

## Capitalization Policy

DC Water’s capitalization policy determines how expenditures will be recognized and accounted. DC Water matches the financing of an asset to its projected useful life and the policy determines how projects will be financed.

### DEFINITION:

- Capital Project – an average life of 30 years and is financed with long-term debt
- Capital Equipment – has a life of at least three years, is financed with short-term debt or cash, and an individual component cost of \$5,000 or more. The cost of capital equipment purchases that are part of a clearly identified capital program can be aggregated. In which case, all costs relating to the capital program are capitalized at the project level regardless to the individual component amount.

The following guidelines are used to categorize items as either capital equipment or an operating expense.

Expenditure Type	Financial Treatment	Definition
<b>Rehabilitation</b>		
Enhancement	Capitalize	Addition/replacement of a sub-component of an asset, to improve the “attributes” of the asset. This will include all such work as valve replacement or replacement of a section of a pipe.
Refurbishment	Capitalize	Expenditure on an asset that creates a material extension to the Estimated Operating Life (EOL) of the asset. This is distinct from maintenance work, which is carried out to ensure that an asset is able to perform its designated function for its normal EOL. An example of refurbishment would be pipe lining and pipe grouting.
Rebuild	Capitalize	Expenditures to reconstruct, renovate, remodel, remake or reassemble an asset or infrastructure after it has been damaged or destroyed. An example of a rebuild is a valve rehabilitation, reconstruction of the valve elements
<b>Replacement</b>	Capitalize	Expenditure to replace substantially all of an asset. An example is replacement and installation of a new pipe including the ensuing disinfection applications and all associated activities relating to the replacement
<b>Repair</b>	Expense	Expenditure on an asset that maintains or restores the design functionality or attributes of an asset, enabling the asset to perform its intended function during its EOL. Examples of these will include service line repairs such as clamp application on service pipes, bolt application/replacement/adjustment, small scale chemical applications such as use of dechlorinating tablets, meter shut off valve, curb stop, small service line repairs that does not involve replacement nor meter housing, high pressure jet vacuum or any other obstruction removal methodology
<b>Maintenance</b>	Expense	Scheduled and recurring costs for the continued performance of an asset



# Capital Improvement Program

(\$ in thousands)

	FY 2021 Actual	FY 2022 - FY 2031 Disbursement Plan										Lifetime Budget	
		FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031		10-yr Total
<b>NON PROCESS FACILITIES</b>													
Facility Land Use	\$21,508	\$31,439	\$12,051	\$28,160	\$14,422	\$6,620	\$3,351	\$1,778	\$387	\$2,000	\$2,000	\$102,208	\$215,847
	<b>\$21,508</b>	<b>\$31,439</b>	<b>\$12,051</b>	<b>\$28,160</b>	<b>\$14,422</b>	<b>\$6,620</b>	<b>\$3,351</b>	<b>\$1,778</b>	<b>\$387</b>	<b>\$2,000</b>	<b>\$2,000</b>	<b>\$102,208</b>	<b>\$215,847</b>
<b>WASTEWATER TREATMENT</b>													
Liquid Processing	\$19,549	\$38,445	\$38,619	\$48,123	\$55,524	\$72,091	\$103,072	\$93,670	\$68,370	\$47,909	\$91,689	657,512	\$1,241,281
Plantwide	\$15,878	\$16,672	\$18,017	\$35,092	\$39,270	\$48,087	\$47,586	\$18,673	\$25,240	\$23,834	\$10,018	282,489	\$502,039
Solids Processing	\$31,863	\$22,422	\$19,722	\$32,546	\$21,534	\$12,258	\$12,445	\$15,045	\$16,099	\$31,675	\$30,414	214,160	\$893,604
Enhanced Nitrogen Removal Facilities	\$4,718	\$8,438	\$2,216	\$1,784	\$74	\$0	\$2,206	\$1,861	\$11,664	\$23,293	\$8,965	60,502	\$808,182
	<b>\$72,007</b>	<b>\$85,978</b>	<b>\$78,574</b>	<b>\$117,545</b>	<b>\$116,402</b>	<b>\$132,436</b>	<b>\$165,310</b>	<b>\$129,249</b>	<b>\$121,373</b>	<b>\$126,710</b>	<b>\$141,086</b>	<b>\$1,214,664</b>	<b>\$3,445,105</b>
<b>COMBINED SEWER OVERFLOW</b>													
DC Clean Rivers Program	\$160,358	\$147,347	\$106,774	\$66,064	\$85,968	\$147,762	\$165,363	\$214,664	\$143,867	\$39,054	\$0	1,116,863	\$2,992,358
Combined Sewer Overflow Program	\$1,158	\$4,919	\$10,929	\$11,240	\$19,218	\$14,179	\$6,396	\$5,459	\$9,306	\$12,350	\$6,306	100,303	\$223,714
	<b>\$161,517</b>	<b>\$152,267</b>	<b>\$117,704</b>	<b>\$77,304</b>	<b>\$105,185</b>	<b>\$161,941</b>	<b>\$171,760</b>	<b>\$220,123</b>	<b>\$153,173</b>	<b>\$51,403</b>	<b>\$6,306</b>	<b>\$1,217,166</b>	<b>\$3,216,072</b>
<b>STORMWATER</b>													
Storm Local Drainage Program	\$0	\$22	\$197	\$1,511	\$2,496	\$1,072	\$1,612	\$1,773	\$1,357	\$234	\$180	\$10,455	\$18,025
Storm On-Going Program	\$592	\$1,572	\$899	\$866	\$519	\$876	\$842	\$1,084	\$1,287	\$935	\$900	\$9,780	\$9,994
Storm Pumping Facilities	\$1,170	\$5,232	\$10,296	\$3,063	\$2,584	\$2,741	\$3,417	\$1,417	\$1,579	\$4,948	\$7,642	\$42,918	\$64,227
Stormwater Program Management	\$0	\$23	\$35	\$35	\$40	\$230	\$286	\$346	\$275	\$212	\$0	\$1,483	\$13,178
Stormwater Trunk/Force Sewers	\$69	\$182	\$99	\$78	\$174	\$67	\$0	\$0	\$0	\$0	\$0	\$600	\$15,510
	<b>\$1,831</b>	<b>\$7,031</b>	<b>\$11,527</b>	<b>\$5,553</b>	<b>\$5,813</b>	<b>\$4,985</b>	<b>\$6,158</b>	<b>\$4,620</b>	<b>\$4,499</b>	<b>\$6,330</b>	<b>\$8,722</b>	<b>\$65,236</b>	<b>\$120,933</b>
<b>SANITARY SEWER</b>													
Sanitary Collection System	\$1,972	\$1,948	\$8,147	\$27,697	\$34,534	\$46,713	\$50,712	\$47,945	\$46,871	\$31,138	\$30,057	\$325,762	\$506,422
Sanitary On-Going Projects	\$13,106	\$15,617	\$13,035	\$14,452	\$13,200	\$13,577	\$13,988	\$14,395	\$14,851	\$15,297	\$15,289	\$143,702	\$215,932
Sanitary Pumping Facilities	\$554	\$2,496	\$10,895	\$13,566	\$8,153	\$10,959	\$12,288	\$25,186	\$30,469	\$35,772	\$20,565	\$170,349	\$251,957
Sanitary Program Management	\$2,662	\$8,471	\$10,316	\$9,538	\$7,897	\$8,880	\$9,915	\$8,887	\$9,034	\$7,028	\$3,497	\$83,462	\$191,840
Interceptor/Trunk Force Sewers	\$9,910	\$39,553	\$60,990	\$85,574	\$67,184	\$80,271	\$119,043	\$87,412	\$48,030	\$40,133	\$10,662	\$638,851	\$1,000,291
	<b>\$28,204</b>	<b>\$68,084</b>	<b>\$103,383</b>	<b>\$150,828</b>	<b>\$130,967</b>	<b>\$160,400</b>	<b>\$205,946</b>	<b>\$183,824</b>	<b>\$149,256</b>	<b>\$129,368</b>	<b>\$80,069</b>	<b>\$1,362,125</b>	<b>\$2,166,442</b>
<b>WATER</b>													
Water Distribution Systems	\$25,789	\$82,276	\$102,848	\$77,198	\$65,128	\$89,029	\$92,136	\$91,572	\$100,969	\$87,062	\$91,501	\$879,719	\$1,771,888
Lead Free DC Program	\$8,253	\$56,987	\$94,377	\$101,955	\$100,624	\$82,147	\$62,407	\$62,749	\$62,550	\$5,155	\$0	\$628,951	\$812,516
Water On-Going Projects	\$14,772	\$14,917	\$15,454	\$15,870	\$15,769	\$15,390	\$17,669	\$18,819	\$20,500	\$21,500	\$20,781	\$176,668	\$231,960
Water Pumping Facilities	\$538	\$3,581	\$4,765	\$12,016	\$5,559	\$5,484	\$2,171	\$3,297	\$527	\$3,084	\$1,229	\$41,711	\$73,904
DDOT Water Projects	\$51	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Water Storage Facilities	\$4,413	\$2,645	\$4,813	\$8,229	\$3,651	\$4,876	\$9,526	\$9,147	\$3,136	\$3,241	\$2,211	\$51,475	\$156,199
Water Service Program Management	\$3,463	\$4,907	\$4,859	\$3,072	\$3,921	\$5,120	\$7,542	\$7,080	\$4,641	\$4,641	\$5,120	\$50,904	\$121,424
	<b>\$57,279</b>	<b>\$165,313</b>	<b>\$227,116</b>	<b>\$218,339</b>	<b>\$194,652</b>	<b>\$202,046</b>	<b>\$191,451</b>	<b>\$192,665</b>	<b>\$192,324</b>	<b>\$124,683</b>	<b>\$120,842</b>	<b>\$1,829,430</b>	<b>\$3,167,891</b>
<b>CAPITAL PROJECTS</b>													
	<b>\$342,345</b>	<b>\$510,112</b>	<b>\$550,355</b>	<b>\$597,728</b>	<b>\$567,442</b>	<b>\$668,428</b>	<b>\$743,975</b>	<b>\$732,259</b>	<b>\$621,011</b>	<b>\$440,494</b>	<b>\$359,025</b>	<b>\$5,790,828</b>	<b>\$12,332,290</b>
CAPITAL EQUIPMENT	\$19,585	\$40,519	\$37,021	\$36,156	\$35,307	\$39,671	\$41,813	\$36,203	\$36,203	\$36,203	\$36,203	\$375,302	\$375,302
WASHINGTON AQUEDUCT	\$9,588	\$16,875	\$59,628	\$34,749	\$17,164	\$27,825	\$37,122	\$14,723	\$11,940	\$19,831	\$13,911	\$253,768	\$253,768
<b>ADDITIONAL CAPITAL PROJECTS</b>	<b>\$29,174</b>	<b>\$57,394</b>	<b>\$96,649</b>	<b>\$70,905</b>	<b>\$52,471</b>	<b>\$67,496</b>	<b>\$78,935</b>	<b>\$50,926</b>	<b>\$48,143</b>	<b>\$56,034</b>	<b>\$50,114</b>	<b>\$629,070</b>	<b>\$629,070</b>
<b>LABOR</b>													
													\$416,097
<b>TOTAL CAPITAL BUDGETS</b>	<b>\$371,518</b>	<b>\$567,507</b>	<b>\$647,004</b>	<b>\$668,633</b>	<b>\$619,913</b>	<b>\$735,924</b>	<b>\$822,910</b>	<b>\$783,185</b>	<b>\$669,154</b>	<b>\$496,528</b>	<b>\$409,140</b>	<b>\$6,419,899</b>	<b>\$13,377,458</b>



# Capital Improvement Program

(\$ in thousands)

## Prioritization Schedule

The Authority evaluates and prioritizes capital projects based on a specific criteria. These criterias are fundamental in developing a CIP based on demonstrated needs and are set forth in the following table and described below.

Approximately 18 percent of the current CIP ten-year disbursements are for large regulatory mandates which includes the Clean Rivers Project. As we progress closer to the completion of the mandated projects, DC Water is able to increase investments in upgrading its aging water and sewer infrastructure.

### MEASURE OF PRIORITY

	1A		2A	2B	2C	2D	3A		3B	
	Mandates		Health & Safety	Board Policy	Potential Failure	High Profile Good Neighbor	Good Engineering High Payback		Good Engineering Lower Payback	
	Agreements, Regulatory standards, Court orders, Issues and Permits requirements, Stipulated Agreements, Etc.		Required to address Public Safety	Undertaken as a result of the Board's commitment to outside agencies	Related to Facilities in danger of failing, or critical to meeting permit requirements	Address Public concerns	Need to fulfill Mission and upgrade Facilities		Lower priority Projects	
FY 2022	\$154,484	27%	\$15,029	\$150,006	\$37,778	\$1,971	\$139,063	25%	\$69,176	\$567,507
FY 2023	\$106,827	17%	\$55,821	\$187,621	\$45,608	\$964	\$161,338	25%	\$88,825	647,004
FY 2024	\$66,090	10%	\$22,047	\$155,503	\$45,047	\$699	\$216,669	32%	\$162,579	668,633
FY 2025	\$85,968	14%	\$7,998	\$144,127	\$51,131	\$1,736	\$193,652	31%	\$135,302	619,914
FY 2026	\$147,762	20%	\$11,743	\$134,922	\$37,683	\$1,189	\$237,784	32%	\$164,842	735,924
FY 2027	\$165,363	20%	\$23,506	\$120,645	\$57,975	\$1,621	\$247,881	30%	\$205,919	822,911
FY 2028	\$214,664	27%	\$12,922	\$130,675	\$48,912	\$2,712	\$191,334	24%	\$181,967	783,185
FY 2029	\$143,867	21%	\$4,455	\$140,653	\$27,111	\$0	\$188,048	28%	\$165,022	669,155
FY 2030	\$39,054	8%	\$2,680	\$68,989	\$40,732	\$0	\$176,511	36%	\$168,563	496,528
FY 2031	\$0	0%	\$2,516	\$68,037	\$19,560	\$0	\$124,905	31%	\$194,121	409,139
<b>Total</b>	<b>\$1,124,077</b>		<b>\$158,715</b>	<b>\$1,301,178</b>	<b>\$411,536</b>	<b>\$10,891</b>	<b>\$1,877,185</b>		<b>\$1,536,316</b>	<b>\$6,419,899</b>
<b>% of Total</b>	<b>17.5%</b>		<b>2.5%</b>	<b>20.3%</b>	<b>6.4%</b>	<b>0.2%</b>	<b>29.2%</b>		<b>23.9%</b>	

(\$ in thousands)

FY 2021 Actual	FY 2022 - 2031 CIP Disbursement Plan										Lifetime Budget	
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031		10-yr Total
\$21,508	\$31,439	\$12,051	\$28,160	\$14,422	\$6,620	\$3,351	\$1,778	\$387	\$2,000	\$2,000	\$102,208	\$215,847



**Non Process Facilities Sewer Building**



**Main Pumping Station**



**Fleet Maintenance Facility**

## Overview

The Non Process Facilities Service Area accommodates projects approved under the Non Process Facilities Master Plan (NPFMP) and related improvements necessary to support DC Water activities and critical operations. The goals of this CIP are the same as those in the NPFMP, which are designed to:

- Optimize healthy sustainable and efficient use of existing DC Water land and facilities
- Introduce state-of-the-art material management technologies that will enhance inventory security, storage, distribution, and transportation
- Implement wellness strategies, green strategies, and sustainable design within DC Water infrastructure and facility planning
- Maximize flexibility throughout DC Water facilities to support management of future treatment needs, distribution system operations, and innovative opportunities

## PROGRAM AREAS

**Facility Land Use** – The primary objective of this service area is to implement the Non-Process Facilities Master Plan (NPFMP) and to ensure that we are meeting the health & hygiene needs of our workforce while efficiently maintaining facilities to support our operations. The facility land use budget provides for improvement projects to DC Water’s regularly occupied facilities. These projects directly contribute to the sustainability of DC Water facilities assets as well as the health and well-being of our employees and visitors in DC Water’s office and shop environments. Some of the projects included in this program are:

- **Renovations to Bryant Street Campus** – The 2013 NPFMP required the development of improved spaces for our Water Operations and expanding critical functions through the development of a proper Emergency Operations Center (EOC), while maintaining the Bryant Street Pump Station’s historic character. In addition to efficiently organizing the space vacated by personnel now located at HQO, this project consists of identifying a range of potential tasks, such as structural/building envelope analysis, energy efficiency and resiliency upgrades, improved parking and workspace planning and warehousing that will modernize and improve operations at the Bryant Street campus.
- **Main & O Redevelopment Efforts** – This project relocates Sewer and Fleet Operations from the Main & O Campus in order to accommodate the redevelopment plans for the District of Columbia in and around the Navy Yard. Costs associated with the acquisition of new land and construction of new facilities will be paid by the District of Columbia, with occupancy targets of FY 2022 for both the Fleet Facility and Sewer Facility occupancy.
- **Main Pump Station Building Modifications** – This project is in place to ensure the historic Main Pump Station will continue to last and humbly represent DC Water’s lasting contributions to Washington DC’s growth and success. This funding will support restoration to the building’s exterior envelope and interior spaces to planning, design and for many years to come. The restoration requires planning, design and construction by historic building specialty companies. In addition to permitting with Department of Consumer and Regulatory Affairs (DCRA), there will be extensive need for outreach and coordination with the State Historic Preservation Office (SHPO) and the Commission of Fine Arts (CFA).
- **Main & O Seawall Restoration** – This project provides for planning, design and construction to rebuild the existing seawall to the south of the new headquarters building. Planning and procurement of design is planned for FY 2022 with design and construction projected to start in FY 2023 through FY 2025. The project will provide for continued protection by the seawall as well as to do our part to support improvements to the Anacostia River waterfront area.
- **Floatable Debris Dock Replacement** – The existing docks are more than 25 years old and need to be replaced. The replacement slips (at least five) and associated new piles will allow flexibility and maneuverability of the boats, overcome the existing draft challenges of the river bottom, and most importantly, create safe conditions for the staff and their operations. Future improvements include the installation of a new boat ramp and updated fencing and lighting to further improve the efficiencies of skimmer boat operations.



- **Renovations to Blue Plains Central Operations Facility** – The 2013 NPFMP called for utilizing the Central Operations Facility as the operations center for Blue Plains as originally intended, consolidating all Engineering staff except Clean Rivers. In addition to efficiently organizing the space vacated by administrative personnel now located at the Headquarters Office, this project consists of identifying a range of potential tasks, such as structural/building envelope analysis, energy efficiency and resiliency upgrades, and improved space planning and document storage that will modernize and improve operations at the facility. The planning and design for this project have been pushed back to FY 2023 – FY 2024 due to revenue impacts of the pandemic.
- **Non-Process Heating, Ventilation, and Air Conditioning (HVAC) and Roofing Projects** – This project is meant to holistically address some of the HVAC and roofing/building envelope challenges that exist throughout DC Water facilities. This will include undertaking proper analysis of our needs given the characterization of the space (occupied versus non-occupied for example) and then developing remediation and renovation plans as identified by the assessment. In FY 2022, the NPF program management team will be pushing forward HVAC and roofing projects with immediate needs and starting inventory and analysis. Then we will look to implement an informed, proactive plan moving forward that considers the proper lifecycle costs of these assets to ensure that our facilities meet the needs of our operations and workforce.

## ACCOMPLISHMENTS

- The new Non-Process Facilities Program Management (NPFPM) contract has been executed and work has begun. This contract provides for program management, planning, design and construction management services to support land use and non-process capital projects. The Facilities Department and NPFPM continue to coordinate with the Department of Engineering and Technical Services on active land use project while the land use program management is in transition.
- The new Sewer Services facility at Ames Place is substantially finished with a final completion date to be determined. The Sewer Services team moved into the new building and has been operating effectively from this new campus.
- The new Fleet Service Facility is currently under construction with completion anticipated in FY 2022.
- DC Water is in the schematic design / program development phase for the renovations at Bryant Street. Bryant Street planning is advancing with interactions with State Historic Preservation Office (SHPO). Determination of Eligibility for the Distribution Building and the warehouse at 200 Bryant Street has been completed and planning is moving forward in coordination with the determinations.
- Planning for the Main & O Seawall Restoration, Floatable Debris Dock Upgrades, Main Pump Station Restoration, Bryant Street Parking Modifications projects is underway in preparation for the procurement of design or design-build services.

## OPERATIONAL IMPACT OF MAJOR CAPITAL PROGRAMS

**Headquarters Building** – This new building is LEED® Platinum Class A certified and incorporated environmentally sustainable features used to capture onsite rainfall for irrigation and non-potable water needs inside the facility. Additionally, alternative energy will be supplied by an innovative sewer heat recovery system that will lower operating cost. The NPFPM team has started the process of LEED Platinum status renewal.



# Non Process Facilities

summary overview financial plan rates&rev

capital

financing departmental glossary

(\$ in thousands)

FACILITY LAND USE	Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion
DS New Headquarters Building	2008	Ongoing	\$1,015	\$1,115	\$15	\$3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,133	\$76,264	2024
DU Water System Laboratory Facilities	2006	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$646	2021
HE Bryant Street Pump Station Building Mod.	2018	Ongoing	\$5	\$599	\$1,356	\$4,437	\$5,149	\$409	\$0	\$0	\$0	\$0	\$0	\$11,950	\$14,370	2026
HF Fort Reno Pump Station	2020	Ongoing	\$0	\$320	\$515	\$1,626	\$381	\$0	\$0	\$0	\$0	\$0	\$0	\$2,841	\$2,950	2025
HH Main & O Redevelopment Efforts	2015	Ongoing	\$20,242	\$21,568	\$713	\$14	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$22,295	\$50,231	2024
HJ Central Operations Facility Renovation	2019	Ongoing	\$9	\$2,866	\$1,307	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,174	\$7,214	2023
HK CMF Renovations And Consolidation	2020	Ongoing	\$110	\$1,001	\$1,028	\$3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,032	\$4,920	2023
NZ Floatable Debris Dock Replacement	2020	Ongoing	\$0	\$754	\$1,851	\$1,929	\$90	\$433	\$131	\$0	\$0	\$0	\$0	\$5,188	\$5,402	2027
RV Non-Process Area - HVAC And Roofing Projects	2020	Ongoing	\$126	\$1,233	\$1,494	\$2,410	\$3,050	\$2,747	\$1,792	\$1,707	\$387	\$2,000	\$2,000	\$18,821	\$19,950	2031
SA Anacostia Pump Station - Field Ops East	2022	New	\$0	\$72	\$33	\$0	\$142	\$398	\$1,290	\$71	\$0	\$0	\$0	\$2,005	\$2,000	2028
SB Bryant Street Parking Modifications	2022	New	\$0	\$145	\$66	\$170	\$758	\$2,633	\$139	\$0	\$0	\$0	\$0	\$3,910	\$4,000	2027
SC Main & O Seawall Restoration (Phase 2 HQO)	2022	New	\$0	\$934	\$1,674	\$6,268	\$3,049	\$0	\$0	\$0	\$0	\$0	\$0	\$11,924	\$12,000	2025
SD Main PS Building Modifications - Historic Restoration	2022	New	\$0	\$517	\$1,686	\$10,999	\$1,802	\$0	\$0	\$0	\$0	\$0	\$0	\$15,005	\$15,000	2025
SE Non-Process Facilities Program Management	2022	New	\$0	\$316	\$315	\$300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$930	\$900	2024
<b>TOTAL FACILITY LAND USE BUDGETS</b>			<b>\$21,508</b>	<b>\$31,439</b>	<b>\$12,051</b>	<b>\$28,160</b>	<b>\$14,422</b>	<b>\$6,620</b>	<b>\$3,351</b>	<b>\$1,778</b>	<b>\$387</b>	<b>\$2,000</b>	<b>\$2,000</b>	<b>\$102,208</b>	<b>\$215,847</b>	
<b>TOTAL NON PROCESS FACILITIES BUDGETS</b>			<b>\$21,508</b>	<b>\$31,439</b>	<b>\$12,051</b>	<b>\$28,160</b>	<b>\$14,422</b>	<b>\$6,620</b>	<b>\$3,351</b>	<b>\$1,778</b>	<b>\$387</b>	<b>\$2,000</b>	<b>\$2,000</b>	<b>\$102,208</b>	<b>\$215,847</b>	

(\$ in thousands)

FY 2021 Actual	FY 2022 - 2031 CIP Disbursement Plan											Lifetime Budget
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-yr Total	
\$72,007	\$85,978	\$78,574	\$117,545	\$116,402	\$132,436	\$165,310	\$129,249	\$121,373	\$126,710	\$141,086	\$1,214,664	\$3,445,105



**Blue Plains Filter Influent Pump Install**



**Blue Plains Gravity Thickener Phase 2**



**Blue Plains Clarification at Wet Weather Treatment Facility**

## Overview

Capital projects in the Wastewater Treatment Service Area are required to rehabilitate, upgrade or provide new facilities at Blue Plains to ensure that it can reliably meet its National Pollutant Discharge Elimination System (NPDES) permit requirements and produce a consistent, high-quality dewatered biosolids product. DC Water’s current NPDES permit is effective from August 26, 2018, through August 25, 2023. This permit requires wastewater treatment to a level that meets one of the most stringent NPDES discharge permits in the United States.

Blue Plains Advanced Wastewater Treatment Plant treats an annual average flow of 320 million gallons per day (MGD) and has a design capacity of 384 MGD, with a peak wet weather design capacity to treat more than one billion gallons per day. Wastewater flows in from the District of Columbia, Montgomery and Prince George’s Counties in Maryland, and Fairfax and Loudoun counties in Virginia.

## PROGRAM AREAS

**Liquids Processing** – Projects in this program area encompass upgrading and rehabilitating facilities involved in handling flows from the sanitary and combined sewer systems. These flows progress sequentially through the Plant processes and ultimately discharge the treated effluents into the Potomac River.

**Plantwide** – This program provides for upgrading, rehabilitating, or installing support systems and facilities that are required for both the liquid processing and solids processing programs.

**Solids Processing** – Biosolids processing involves reductions in volume along with treatment to meet applicable federal, state and local requirements for beneficial reuse of biosolids. Treatment is provided by a system of processing facilities that include gravity thickening of primary sludge, floatation thickening of the biological waste sludge produced by the secondary and nitrogen removal processes, pre-dewatering of blended thickened solids by centrifuge, pretreatment of solids by thermal hydrolysis, anaerobic digestion, and final dewatering of Class A biosolids by belt filter press.

**Enhanced Nitrogen Removal Facilities** – Provides for new facilities and upgrades to existing facilities needed at Blue Plains to meet the total nitrogen discharge limit assigned to DC Water. In addition to expansion of existing nitrification and denitrification processes, this program includes a new wet weather treatment facility that simultaneously treats combined stored sewage and reduces the peak flow through the biological treatment system. The necessary facilities to meet the current NPDES permit are in operation. However, close out activities continued into fiscal year 2022 and an expansion will be required in the future to treat future increased influent load to the Plant.

## ACCOMPLISHMENTS

- Ongoing construction of Raw Wastewater Pumping Station 2 (RWWPS2) – The pump station delivers wastewater from the wastewater collection system to the east preliminary treatment processes at Blue Plains. This project updates aging electrical equipment, both replacing equipment that is beyond its useful life and relocating sensitive electronic equipment to a less corrosive environment to reduce the rate of deterioration of the equipment. All nine (9) pumps in this station have been rehabilitated and placed in service.
- Completion of the Floodwall Segment C construction at Blue Plains – This is one of five segments that once completed, will protect the wastewater treatment plant from river levels up to the 500-year flood elevation with sufficient freeboard to protect against storm surge as well.
- Ongoing construction for replacement of Filter Influent Pumps 1-10 – These pumps deliver nitrified and denitrified effluent to the filtration process at Blue Plains, which removes solids and phosphorus to meet permit limits. Three (3) of the ten (10) pumps have been upgraded.
- Ongoing construction for Gravity Thickener Upgrades – This project includes upgrading ten (10) gravity thickeners as well as the primary sludge de-gritting systems and associated electrical and instrumentation and control systems. Three (3) of the ten (10) gravity thickeners have been upgraded.
- Ongoing construction to replace thirteen (13) influent screens – This equipment screens all the wastewater influent to Blue Plains and removes rags and objects upstream of critical treatment processes protecting equipment and performance effectiveness. Ten (10) of the thirteen (13) screens have been upgraded.
- Commencement of the Miscellaneous Facilities Upgrades Phase 7 project – This project will perform emergency and non-emergency related repairs at Blue Plains and the various Storm and Sanitary Pump Stations serving the District.
- Ongoing construction for the Final Reclaimed Effluent Pump Station Upgrade – The Reclaimed Final Effluent (RFE) pump system is the source of water for the Process Service Water system (PSW) at Blue Plains. The project upgrades equipment for reliability as well as increasing capacity to meet the demand of facilities that have been added to the wastewater treatment plant in recent years.

## OPERATIONAL IMPACT OF MAJOR CAPITAL PROGRAMS

**Liquid Processing Program** – Projects in this program enable DC Water to continue to produce excellent quality effluent into the Potomac River and meet NPDES permit requirements. Completion of RWWPS2 Upgrade improved system reliability and increased redundancy and has extended the useful life of assets in the station.

**Plantwide Projects Program** – Significant projects in this program upgrade the power distribution system at Blue Plains. These include investments in power monitoring and controls with a goal to establish a microgrid. This new equipment will be used to optimize the distributed energy system, which includes an on-site solar generation and a combined heat and power plant.



# Wastewater Treatment

(\$ in thousands)

LIQUID PROCESSING	Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion
A2 Liquid Processing Program Management	2001	Ongoing	\$0	\$4,466	\$3,120	\$2,621	\$2,985	\$4,926	\$6,674	\$7,100	\$8,278	\$6,266	\$4,332	\$50,768	64,027	2035
B6 Primary Sedimentation Tank Covers	2026	Ongoing	\$0	\$0	\$0	\$0	\$0	\$646	\$1,017	\$137	\$2,168	\$2,620	\$19,763	\$26,351	43,598	2032
B7 Primary Sedimentation Tank Odor Scrubblers	2028	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,433	\$1,456	\$2,640	\$8,859	\$14,388	45,870	2032
BC Headworks Influent Structures	2017	Ongoing	\$982	\$751	\$1,620	\$6,253	\$5,594	\$1,935	\$0	\$0	\$0	\$0	\$0	\$16,153	19,323	2026
BQ Grit and Screenings and Primary	2018	Ongoing	\$1,714	\$2,550	\$5,518	\$22,628	\$15,049	\$0	\$0	\$0	\$0	\$0	\$0	\$45,745	55,698	2025
BR Nitrification/Denitrification Facility	2006	Ongoing	\$128	\$16	\$1,516	\$247	\$236	\$148	\$22	\$0	\$0	\$0	\$0	\$2,184	54,803	2027
BT Filtration/Disinfection Facility Phase II	2008	Ongoing	\$6	\$0	\$150	\$72	\$562	\$1,479	\$329	\$0	\$0	\$0	\$0	\$2,592	24,018	2027
BV Raw Wastewater Pump Station No. 2 Upgrades	2013	Ongoing	\$2,532	\$1,758	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,758	46,898	2022
I4 Grit Removal Facilities - 20 Year Rebuild	2031	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,300	\$2,300	52,500	2033
I5 Raw Water Pump Stations 1 & 2 - 20 Year Rebuild	2024	Ongoing	\$0	\$0	\$0	\$715	\$919	\$7,828	\$10,774	\$3,478	\$0	\$0	\$0	\$23,715	29,000	2028
I7 Primary Treatment - 20 Year Rebuild	2023	Ongoing	\$0	\$0	\$100	\$402	\$2,637	\$3,637	\$13,845	\$20,310	\$8,702	\$0	\$0	\$49,633	54,600	2029
IY Effluent Filter Upgrade	2017	Ongoing	\$832	\$9,460	\$15,949	\$5,388	\$13,920	\$25,132	\$28,658	\$16,540	\$10,492	\$5,392	\$9,012	\$139,944	169,842	2031
IZ Replace/Upgrade Influent Screens	2016	Ongoing	\$4,879	\$7,869	\$0	\$0	\$0	\$0	\$260	\$2,723	\$2,264	\$6,551	\$22,676	\$42,343	81,490	2033
J2 Replace/Upgrade Primary Treatment Mechanisms	2018	Ongoing	\$236	\$1,480	\$4,187	\$3,938	\$3,200	\$3,816	\$3,138	\$702	\$0	\$0	\$0	\$20,460	29,190	2028
J6 Deammonification Project	2013	Ongoing	\$0	\$0	\$416	\$158	\$1,917	\$1,137	\$0	\$0	\$0	\$0	\$0	\$3,628	3,848	2026
JC Secondary East and West - 20 Year Rebuild	2027	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$559	\$6,462	\$16,422	\$20,596	\$19,612	\$63,650	96,000	2034
LC Effluent Disinfection Upgrades	2023	Ongoing	\$0	\$0	\$1	\$769	\$80	\$481	\$4,301	\$1,537	\$0	\$0	\$0	\$7,169	8,011	2028
LF Nitrification Reactor/Sedimentation - 20 Year Rebuild	2023	Ongoing	\$0	\$0	\$90	\$480	\$1,334	\$1,854	\$2,686	\$3,543	\$3,899	\$3,024	\$5,135	\$22,047	139,980	2035
OZ Grit Chambers 1 & 2 Upgrades	2017	Ongoing	\$156	\$0	\$1	\$463	\$619	\$5,037	\$3,912	\$0	\$0	\$0	\$0	\$10,032	15,130	2027
PD Secondary East & West Upgrades	2016	Ongoing	\$0	\$0	\$0	\$0	\$368	\$508	\$4,034	\$3,221	\$0	\$0	\$0	\$8,131	9,685	2028
PE Nitrification Reactor/Sedimentation Upgrades	2017	Ongoing	\$89	\$1,739	\$1,401	\$3,866	\$4,314	\$556	\$0	\$0	\$0	\$0	\$0	\$11,878	14,994	2026
RN Liquids Processing Rehabilitation	2020	Ongoing	\$0	\$0	\$1,049	\$122	\$1,792	\$10,104	\$8,170	\$551	\$0	\$0	\$0	\$21,788	23,321	2028
RW Long-term Concrete Rehabilitation Projects	2026	New	\$0	\$0	\$0	\$0	\$0	\$2,866	\$14,693	\$25,934	\$14,688	\$819	\$0	\$59,000	62,820	2030
UC Filtration/Disinfection Facility	2000	Ongoing	\$7,995	\$8,355	\$3,501	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,856	96,636	2023
<b>TOTAL LIQUID PROCESSING BUDGETS</b>			<b>\$19,549</b>	<b>\$38,445</b>	<b>\$38,619</b>	<b>\$48,123</b>	<b>\$55,524</b>	<b>\$72,091</b>	<b>\$103,072</b>	<b>\$93,670</b>	<b>\$68,370</b>	<b>\$47,909</b>	<b>\$91,689</b>	<b>\$657,512</b>	<b>\$1,241,281</b>	



# Wastewater Treatment

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(\$ in thousands)

PLANTWIDE	Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion
AL Plantwide Project Program Management	2001	Ongoing	\$4,695	\$3,648	\$2,047	\$1,677	\$2,088	\$1,693	\$1,285	\$4	\$858	\$1,385	\$953	\$15,637	\$51,973	2031
BY Additional Chemical Systems Phase III	2024	Ongoing	\$0	\$0	\$0	\$154	\$78	\$1,482	\$1,629	\$91	\$0	\$0	\$0	\$3,434	\$3,822	2029
CH Miscellaneous Facility Projects	2004	Ongoing	\$0	\$5	\$5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$10	\$8,039	2023
CV Laboratory Upgrades	2006	Ongoing	\$79	\$652	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$652	\$9,291	2022
CW Security at Blue Plains	2005	Ongoing	\$333	\$1,458	\$254	\$21	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,733	\$6,617	2024
EI Plantwide Painting of Steel Pipes	2012	Ongoing	\$0	\$0	\$0	\$1,282	\$2,918	\$1,290	\$0	\$0	\$0	\$0	\$0	\$5,490	\$5,570	2026
GP Instrumentation & Control & Electric Program Management	2009	Ongoing	\$883	\$1,200	\$247	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,447	\$6,373	2023
GW Control Systems Replacement	2022	Ongoing	\$0	\$0	\$173	\$745	\$328	\$1,086	\$1,471	\$6,187	\$12,324	\$8,062	\$4,290	\$34,667	\$37,000	2031
HL DWT - Process and Operations Jobs	2011	Ongoing	\$484	\$440	\$43	\$868	\$306	\$0	\$0	\$0	\$0	\$0	\$0	\$1,657	\$9,213	2025
IC Electrical Monitoring Systems	2015	Ongoing	\$0	\$108	\$480	\$907	\$1,033	\$9,929	\$11,601	\$618	\$0	\$0	\$0	\$24,676	\$26,130	2028
IT Hauled Waste Receiving Facility	2020	Ongoing	\$366	\$0	\$227	\$209	\$2,878	\$607	\$0	\$0	\$0	\$0	\$0	\$3,921	\$5,000	2026
IU Solar Photovoltaic System	2020	Ongoing	\$512	\$20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20	\$960	2022
IV Blue Plains IT Backbone Fibre-Optic Cables Tubes	2016	Ongoing	\$54	\$97	\$821	\$1,609	\$339	\$281	\$16	\$0	\$0	\$0	\$0	\$3,164	\$5,899	2027
JF Construction of Flood Seawall	2019	Ongoing	\$5,302	\$466	\$3	\$5,174	\$3,936	\$341	\$0	\$0	\$0	\$0	\$0	\$9,920	\$17,218	2026
LS Miscellaneous Facility Projects FY 2013	2013	Ongoing	\$1,024	\$223	\$319	\$681	\$754	\$754	\$748	\$451	\$450	\$115	\$0	\$4,493	\$17,582	2030
LX Process Control System Upgrade	2021	Ongoing	\$0	\$1,588	\$1,042	\$1,150	\$147	\$0	\$0	\$0	\$0	\$0	\$0	\$3,927	\$4,000	2025
OD Plantwide Paving	2015	Ongoing	\$37	\$3	\$1	\$285	\$747	\$410	\$100	\$3,117	\$1,783	\$0	\$0	\$6,446	\$8,240	2029
OE Plantwide Drainage & Runoff	2016	Ongoing	\$0	\$561	\$5,074	\$3,484	\$5,277	\$2,305	\$0	\$0	\$0	\$0	\$0	\$16,701	\$19,112	2026
OG City Water & Sewer Upgrades at Wastewater Treatment	2022	Ongoing	\$0	\$0	\$30	\$34	\$775	\$344	\$0	\$0	\$0	\$0	\$0	\$1,183	\$1,403	2026
OH Plantwide Demolition	2026	Ongoing	\$0	\$0	\$0	\$0	\$784	\$3,658	\$2,296	\$763	\$0	\$1,773	\$1,668	\$10,941	\$11,100	2032
OM Plantwide Hot Water System/ Loop Rehabilitation	2017	Ongoing	\$156	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8,209	2021
ON Plantwide Grounding Upgrades	2020	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,500	2021
OP Plantwide Sump Pump Rehabilitation	2020	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,000	2021
OQ Plantwide Roofing Upgrades	2022	Ongoing	\$0	\$0	\$120	\$496	\$764	\$4,102	\$4,524	\$0	\$0	\$0	\$0	\$10,006	\$10,000	2027
OS Plantwide Lighting Upgrades	2017	Ongoing	\$985	\$0	\$651	\$3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$655	\$3,723	2024
PF Chemical System/Building Upgrades	2015	Ongoing	\$78	\$686	\$226	\$2,442	\$3,240	\$2,945	\$5,644	\$1,339	\$0	\$0	\$0	\$16,522	\$26,660	2028
TZ Electric Power System - Power Gear	2001	Ongoing	\$285	\$5,034	\$3,318	\$7,866	\$6,432	\$10,201	\$13,133	\$5,060	\$0	\$0	\$0	\$51,044	\$71,666	2028
U2 Wastewater Thermal Energy	2020	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$126	\$126	\$18,430	2031
V1 MFU8 - Rehabilitation and Emergency Response VIII	2023	New	\$0	\$0	\$2,251	\$2,472	\$2,465	\$2,426	\$772	\$0	\$0	\$0	\$0	\$10,386	\$10,280	2027
V2 MFU9 - Rehabilitation and Emergency Response IX	2023	New	\$0	\$0	\$294	\$2,118	\$2,447	\$2,446	\$2,417	\$571	\$0	\$0	\$0	\$10,294	\$10,280	2028
V3 MFU10 - Rehabilitation and Emergency Response - Plantwide	2023	New	\$0	\$0	\$309	\$1,186	\$1,224	\$1,217	\$1,198	\$0	\$0	\$0	\$0	\$5,135	\$5,120	2027
YD Miscellaneous Projects	1999	Ongoing	\$606	\$483	\$84	\$228	\$311	\$569	\$752	\$473	\$304	\$0	\$0	\$3,204	\$51,630	2029
XP Efficiency Improvements	2029	New	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,521	\$12,500	\$2,979	\$25,000	\$25,000	2031
<b>TOTAL PLANTWIDE BUDGETS</b>			<b>\$15,878</b>	<b>\$16,672</b>	<b>\$18,017</b>	<b>\$35,092</b>	<b>\$39,270</b>	<b>\$48,087</b>	<b>\$47,586</b>	<b>\$18,673</b>	<b>\$25,240</b>	<b>\$23,834</b>	<b>\$10,018</b>	<b>\$282,489</b>	<b>\$502,039</b>	





# Wastewater Treatment

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SOLIDS PROCESSING		Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion
AM	Solids Processing Program Management	2001	Ongoing	\$3,247	\$2,248	\$1,100	\$598	\$1,236	\$1,608	\$1,540	\$1,198	\$1,356	\$1,918	\$1,320	\$14,124	\$22,630	2031
BX	Gravity Thickener Upgrades Phase II	2010	Ongoing	\$26,562	\$18,862	\$13,117	\$4,062	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$36,041	\$83,993	2024
EV	Area Substation No. 6	2008	Ongoing	\$30	\$42	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$42	\$22,106	2022
I3	Biosolids Blending Development Center	2015	Ongoing	\$0	\$177	\$785	\$9,679	\$124	\$0	\$0	\$0	\$0	\$0	\$0	\$10,765	\$12,093	2025
LD	Pre-Dewatering Additional Centrifuges	2020	Ongoing	\$176	\$649	\$938	\$5,505	\$2,108	\$0	\$0	\$0	\$0	\$0	\$0	\$9,200	\$10,051	2025
LE	High Strength Waste Receiving Facility (Includes Fats, Oils & Grease)	2024	Ongoing	\$0	\$0	\$0	\$125	\$352	\$3,052	\$1,751	\$0	\$0	\$0	\$0	\$5,280	\$6,008	2027
RM	Biosolids Rehabilitation	2021	Ongoing	\$0	\$145	\$2,823	\$6,603	\$9,170	\$1,218	\$5,856	\$4,310	\$2,399	\$17,413	\$16,750	\$66,685	\$79,996	2033
XA	New Digestion Facilities	1999	Ongoing	\$1,454	\$136	\$475	\$80	\$3	\$0	\$0	\$0	\$0	\$0	\$0	\$693	\$552,905	2025
XZ	Solids Processing Building / Dewatered Sludge Loading Facility	1999	Ongoing	\$395	\$163	\$174	\$4,708	\$7,317	\$5,162	\$2,100	\$1,739	\$1,956	\$1,956	\$1,956	\$27,231	\$44,703	2032
XY	Process Control & Computer Sys	2028	New	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,799	\$10,389	\$10,389	\$10,389	\$38,964	\$54,000	2033
V4	MFU10 - Rehabilitation and Emergency Response - Biosolids X	2023	New	\$0	\$0	\$309	\$1,186	\$1,224	\$1,217	\$1,198	\$0	\$0	\$0	\$0	\$5,135	\$5,120	2027
<b>TOTAL SOLIDS PROCESSING BUDGETS</b>				<b>\$31,863</b>	<b>\$22,422</b>	<b>\$19,722</b>	<b>\$32,546</b>	<b>\$21,534</b>	<b>\$12,258</b>	<b>\$12,445</b>	<b>\$15,045</b>	<b>\$16,099</b>	<b>\$31,675</b>	<b>\$30,414</b>	<b>\$214,160</b>	<b>\$893,604</b>	
ENHANCED NITROGEN REMOVAL		Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion
BI	Enhanced Nitrogen Removal (ENR) North	2008	Ongoing	\$11	\$60	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$60	\$77,086	2022
E8	Enhanced Clarification Facilities	2009	Ongoing	\$2,230	\$5,339	\$2,216	\$1,784	\$74	\$0	\$0	\$0	\$0	\$0	\$0	\$9,414	\$180,487	2025
E9	Nitrogen Removal Facilities	2008	Ongoing	\$20	\$39	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$39	\$272,998	2022
EE	Filtrate Treatment Facilities	2009	Ongoing	\$286	\$428	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$428	\$108,294	2022
FG	Secondary Treatment Upgrades for Total Nitrogen	2013	Ongoing	\$0	\$443	\$0	\$0	\$0	\$0	\$2,206	\$1,861	\$11,664	\$23,293	\$8,965	\$48,433	\$57,168	2032
FR	Blue Plains Tunnel Dewatering Pumping Station	2010	Ongoing	\$53	\$1,212	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,212	\$35,657	2022
FS	Bolling Overflow & Diversion	2010	Ongoing	\$685	\$917	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$917	\$56,391	2022
LM	Enhanced Nitrogen Removal Program Management	2013	Ongoing	\$1,433	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,100	2021
<b>TOTAL ENHANCED NITROGEN REMOVAL BUDGETS</b>				<b>\$4,718</b>	<b>\$8,438</b>	<b>\$2,216</b>	<b>\$1,784</b>	<b>\$74</b>	<b>\$0</b>	<b>\$2,206</b>	<b>\$1,861</b>	<b>\$11,664</b>	<b>\$23,293</b>	<b>\$8,965</b>	<b>\$60,502</b>	<b>\$808,182</b>	
<b>TOTAL WASTEWATER TREATMENT BUDGETS</b>				<b>\$72,007</b>	<b>\$85,978</b>	<b>\$78,574</b>	<b>\$117,545</b>	<b>\$116,402</b>	<b>\$132,436</b>	<b>\$165,310</b>	<b>\$129,249</b>	<b>\$121,373</b>	<b>\$126,710</b>	<b>\$141,086</b>	<b>\$1,214,664</b>	<b>\$3,445,105</b>	

(\$ in thousands)

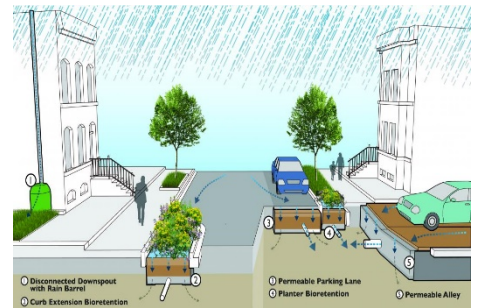
FY 2021 Actual	FY 2022 - 2031 CIP Disbursement Plan											Lifetime Budget
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-yr Total	
\$161,517	\$152,267	\$117,704	\$77,304	\$105,185	\$161,941	\$171,760	\$220,123	\$153,173	\$51,403	\$6,306	\$1,217,166	\$3,216,072



DCCR NEBT B Street



DDCR Mt Olivet Road Approach Channel



Rock Creek Project B Green Infrastructure

## Overview

Similar to more than 700 older communities primarily in the Mid-Atlantic, Northeast, and Midwest portions of the country, a portion of the District of Columbia is served by a combined sewer system. Combined sewers convey both stormwater runoff and sanitary sewage from homes and businesses in a single pipe. In dry weather, the system delivers wastewater to the Blue Plains Advanced Wastewater Treatment Plant. In wet weather, stormwater runoff also enters the system and, if the conveyance capacity of the system is exceeded, the excess flow spills into the waterways of the District of Columbia to prevent surface flooding and basement backups. This discharge is called Combined Sewer Overflow (CSO). Approximately one-third of the system is combined, mostly in the downtown and older parts of the city. There are 47 potentially active CSO outfalls in the District.

DC Water has made substantial progress in the implementation of its CSO Long Term Control Plan (LTCP), called the DC Clean Rivers Project, to reduce CSOs that discharge to the Anacostia and Potomac Rivers, as well as Rock Creek. The first phase of the Anacostia River tunnel system was completed and all structures south of Robert F. Kennedy (RFK) stadium placed into operation as of March 2018. DC Water continues to implement the remaining project for the Anacostia River (currently under construction), as well as future projects for the Potomac River and Rock Creek currently under design. When fully implemented, CSOs will be reduced by a projected 96 percent city-wide during an average year (98 percent on the Anacostia River), resulting in improved water quality and significantly reducing debris in our nation’s capital waterways.

## PROGRAM AREAS

**DC Clean Rivers** – The plan includes a variety of improvements throughout portions of the District served by combined sewers, including a series of massive tunnels and diversion facilities to control CSOs and relieve surface flooding, and a tunnel dewatering pumping station and wet weather treatment facility at Blue Plains. The controls for the Anacostia River are scheduled to be complete by 2023, ahead of the 2025 Consent Decree deadline. The Potomac River and Rock Creek controls are scheduled to be complete in 2030. The Potomac River controls include the Potomac Tunnel, which is currently in design and CSO 025/026 sewer separation, which is under construction. The Rock Creek controls include a hybrid mix of green infrastructure (GI) and gray storage optimizing the benefits provided by each technology. The hybrid approach comprises constructing GI to manage 92 impervious acres and a 4.2-million-gallon storage facility to control CSO 049 in Piney Branch.

**Program Management** – The CSO Program Manager is responsible for evaluation of combined sewer systems, as well as management for sewer pumping station replacement and other sewer infrastructure projects.

**Combined Sewer** – Projects within the Combined Sewer Program Area include rehabilitation and/or relocation of combined sewers, control of wet weather-related pollution, and upgrades to pumping stations. Most projects in this Program Area include planned upgrades to facilities based on our long-term facilities plan.

## ACCOMPLISHMENTS

- In April 2021, DC Water's tunnel boring machine completed mining the five-mile-long Northeast Boundary Tunnel (NEBT). Construction continues at near-surface structures.
- Completed 90% design of Request for Proposal (RFP) documents for the Potomac River Tunnel Contract B—Tunnel System Construction Project. This Project is scheduled to begin construction in 2023 and be placed into operation by February 8, 2030.
- The Advance Utility Construction contract to provide electrical services and relocate utilities in advance of the Potomac River Tunnel construction was awarded on August 25, 2021, and construction is underway.
- Construction is underway for separation of CSO 025/026 which is scheduled for completion in 2022.
- For Rock Creek Green Infrastructure, the construction contract for the second Rock Creek project (RC-B) was awarded on December 1, 2021, and construction is underway.
- Continued the deployment of Clean Rivers' assets into DC Water's enterprise asset management system.
- Continued the coordination of preventive maintenance of Clean Rivers assets.

## ACCOMPLISHMENTS CONTINUED

- Continued the maintenance of Green Infrastructure facilities.
- Began National Environmental Policy Act (NEPA) Studies for Rock Creek CSO control facilities.
- Complied with regulatory requirements to implement project per specified schedule.

## OPERATIONAL IMPACT OF MAJOR CAPITAL PROGRAMS

***DC Clean Rivers*** – This project aims to control CSOs to the Anacostia and Potomac Rivers and Rock Creek to meet the District’s water quality standards, while improving the health of the Chesapeake Bay and addressing flooding in Northeast Boundary. This ongoing project includes green infrastructure initiatives that will divert stormwater runoff prior to entering the sewer system. The first portion of the Anacostia River Tunnel System, between Blue Plains and Overflow and Diversion Facilities (CSO-019) is complete. All structures south of RFK Stadium have been in operation since March 20, 2018. As of January 2022, the first portion of the Anacostia River Tunnel system had captured approximately 12.7 billion gallons of combined sewer overflows and 7,982 tons of trash, debris, and other solids. The system is achieving nearly 91% CSO capture rate, exceeding the projected 80% capture rate at this stage of implementation. The tunnel system will improve operational flexibility by providing alternate means of transferring flow to Blue Plains, thereby allowing temporary diversion of flows to the tunnel to facilitate operation, maintenance and rehabilitation throughout the combined sewer system.



# Combined Sewer Overflow

(\$ in thousands)

DC CLEAN RIVERS		Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion
CY	Anacostia Long Term Control Plan Projects	2005	Ongoing	\$137,120	\$109,335	\$74,536	\$611	\$543	\$689	\$618	\$566	\$475	\$664	\$0	\$188,037	\$1,931,960	2030
CZ	Potomac Long Term Control Plan Projects	2010	Ongoing	\$18,303	\$26,890	\$21,475	\$60,634	\$76,951	\$130,008	\$152,778	\$173,928	\$79,373	\$20,146	\$0	\$742,182	\$854,877	2030
DZ	Rock Creek CSS LTCP Project	2010	Ongoing	\$4,935	\$11,122	\$10,764	\$4,819	\$8,473	\$17,065	\$11,967	\$40,170	\$64,019	\$18,244	\$0	\$186,644	\$205,520	2030
<b>TOTAL DC CLEAN RIVERS BUDGETS</b>				<b>\$160,358</b>	<b>\$147,347</b>	<b>\$106,774</b>	<b>\$66,064</b>	<b>\$85,968</b>	<b>\$147,762</b>	<b>\$165,363</b>	<b>\$214,664</b>	<b>\$143,867</b>	<b>\$39,054</b>	<b>\$0</b>	<b>\$1,116,863</b>	<b>\$2,992,358</b>	
COMBINED SEWER		Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion
BA	DC Water Low Impact Development Projects	2002	Ongoing	\$0	\$288	\$122	\$26	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$436	\$2,870	2024
EJ	Potomac Pumping Station - Phase III Rehabilitation	2010	Ongoing	\$124	\$895	\$2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$897	\$36,098	2023
EK	Long Term Rehabilitation - Main & O Pump Station	2021	Ongoing	\$0	\$0	\$372	\$1,672	\$3,839	\$8,851	\$6,338	\$5,415	\$9,261	\$12,306	\$6,263	\$54,317	\$78,725	2031
EQ	Potomac Pumping Station-Phase IV Rehabilitation	2020	Ongoing	\$0	\$20	\$117	\$303	\$533	\$326	\$15	\$0	\$0	\$0	\$0	\$1,313	\$2,616	2027
FQ	Main & O Street PS Intermediate Upgrade	2010	Ongoing	\$1,030	\$3,478	\$7,232	\$1,388	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,097	\$37,419	2024
FX	Rehabilitation Northeast Boundary Sewer - Phase I	2015	Ongoing	\$0	\$11	\$8	\$12	\$26	\$44	\$44	\$44	\$46	\$44	\$43	\$321	\$4,628	2032
FZ	Tiber Creek Sewer Lining - Phase I	2016	Ongoing	\$0	\$0	\$602	\$376	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$978	\$1,000	2024
G7	Combined Sewers Under Buildings	2009	Ongoing	\$4	\$16	\$791	\$1,682	\$7,783	\$911	\$0	\$0	\$0	\$0	\$0	\$11,183	\$21,885	2026
IH	Combined Sewer Rehabilitation 2	2013	Ongoing	\$0	\$27	\$1,087	\$1,096	\$5,916	\$4,047	\$0	\$0	\$0	\$0	\$0	\$12,173	\$31,798	2026
OB	FY 2024 - Inflatable Dams Replacement	2022	Ongoing	\$0	\$185	\$596	\$4,686	\$1,121	\$0	\$0	\$0	\$0	\$0	\$0	\$6,588	\$6,675	2025
<b>TOTAL COMBINED SEWER BUDGETS</b>				<b>\$1,158</b>	<b>\$4,919</b>	<b>\$10,929</b>	<b>\$11,240</b>	<b>\$19,218</b>	<b>\$14,179</b>	<b>\$6,396</b>	<b>\$5,459</b>	<b>\$9,306</b>	<b>\$12,350</b>	<b>\$6,306</b>	<b>\$100,303</b>	<b>\$223,714</b>	
<b>TOTAL COMBINED SEWER OVERFLOW BUDGETS</b>				<b>\$161,517</b>	<b>\$152,267</b>	<b>\$117,704</b>	<b>\$77,304</b>	<b>\$105,185</b>	<b>\$161,941</b>	<b>\$171,760</b>	<b>\$220,123</b>	<b>\$153,173</b>	<b>\$51,403</b>	<b>\$6,306</b>	<b>\$1,217,166</b>	<b>\$3,216,072</b>	

(\$ in thousands)

FY 2021 Actual	FY 2022 - 2031 CIP Disbursement Plan										Lifetime Budget	
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031		10-yr Total
\$1,831	\$7,031	\$11,527	\$5,553	\$5,813	\$4,985	\$6,158	\$4,620	\$4,499	\$6,330	\$8,722	\$65,236	\$120,933



City Street Catch Basin



Stormwater Overflow Control Room



Stormwater Catch Basin

## Overview

Stormwater runoff occurs when rain or snowmelt flows over impervious surfaces or surfaces that do not allow water to soak into the ground such as roads, driveways, sidewalks, parking lots, and buildings. The District is required to meet certain regulatory requirements in managing its separate stormwater system under the District’s Municipal Separate Storm Sewer System (MS4) permit issued by the federal government.

The stormwater system has approximately 580 miles of storm sewer pipes, catch basins, inlets, special structures, and related facilities. Some components of the existing storm sewer system are over 100 years old. DC Water is responsible for the maintenance and replacement of the publicly owned collection and conveyance facilities that transport stormwater runoff to the Anacostia and Potomac Rivers, Rock Creek, and other receiving streams within the District of Columbia.

### PROGRAM AREAS

**Local Drainage** – This category includes several projects for investigation, design and rehabilitation of local sewers to relieve local flooding and to address short term needs for improvements to storm sewers located in the separate and combined sewer areas.

**On-Going** – These include storm sewer rehabilitation projects carried out by DC Water’s Department of Pumping and Sewer Operations. These annual projects also provide funding to assist in immediate storm sewer construction to alleviate flooding.

**Pumping Facilities** – DC Water’s 16 stormwater pump stations serve critical areas of the District and are integral to the road network to maintain safe passage of vehicles through areas that do not drain without the assistance of mechanical means. DC Water has projects to upgrade all 16 of these stormwater pump stations to replace aging equipment and improve reliability, safety, and code compliance.

**Program Management** – Provides engineering program management services for the stormwater service area capital projects and required technical assessments and hydraulic studies required to assess problems in the stormwater system. It also provides engineering services for condition assessment of the storm sewer system.

**Interceptor Trunk/Force Sewers** – Provides for the design and construction services for stormwater interceptors, trunk sewers and force mains that require upgrades. Sewers rehabilitated by this project are defined by the major planning and condition assessment program underway for the stormwater sewer system. As the assessment of the storm sewer system progresses and specific rehabilitation needs are identified, jobs will be created under this program area to remediate system problems.

## ACCOMPLISHMENTS

- Construction continued for the rehabilitation and improvement of the Watts Branch Storm Sewer Phase 3.
- Construction contract awarded for several stormwater pump stations, including 1<sup>st</sup> and D Stormwater Pump Station, 12<sup>th</sup> and Maine Street SW Stormwater Pump Station, and Portland Street Stormwater Pump Station.
- SCADA control system upgrades are planned for all 16 stormwater pump stations. Upgrades have been completed for 10 stormwater pump stations. This work is partially funded by a grant from FEMA.
- Rehabilitation to multiple stormwater outfalls area included in a number of sewer rehabilitation projects.

## OPERATIONAL IMPACT OF MAJOR CAPITAL PROGRAMS

**Stormwater Pump Stations Rehabilitation** – This project implements the highest priority rehabilitation or upgrades, addresses issues related to health and safety and station reliability, and will reduce maintenance needs.



# Stormwater

summary overview financial plan rates&rev

capital

financing departmental glossary

(\$ in thousands)

LOCAL DRAINAGE		Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion	
GY	Storm Sewer Rehabilitation at Various Location	2013	Ongoing	\$0	\$0	\$0	\$282	\$749	\$0	\$0	\$0	\$0	\$0	\$0	\$1,032	\$5,908	2025	
IE	Storm Sewer Rehabilitation 3	2020	Ongoing	\$0	\$22	\$197	\$1,228	\$1,674	\$717	\$0	\$0	\$0	\$0	\$0	\$3,838	\$4,817	2026	
RR	Local Storm Sewer Rehabilitation	2025	Ongoing	\$0	\$0	\$0	\$0	\$72	\$355	\$1,612	\$1,773	\$1,357	\$234	\$180	\$5,585	\$7,300	2031	
<b>TOTAL LOCAL DRAINAGE BUDGETS</b>				<b>\$0</b>	<b>\$22</b>	<b>\$197</b>	<b>\$1,511</b>	<b>\$2,496</b>	<b>\$1,072</b>	<b>\$1,612</b>	<b>\$1,773</b>	<b>\$1,357</b>	<b>\$234</b>	<b>\$180</b>	<b>\$10,455</b>	<b>\$18,025</b>		
ON-GOING		Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion	
FN	FY2017 - DSS Stormwater Projects	2017	Closed	\$23	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	2021	
H5	FY2018 - DSS Stormwater Projects	2018	Closed	\$66	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	2021	
JH	FY2020 - DSS Stormwater Projects	2020	Ongoing	\$443	\$145	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$145	\$820	2022	
LO	FY2021 - DSS Stormwater Projects	2021	Ongoing	\$60	\$803	\$20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$824	\$845	2023	
M8	FY2022 - DSS Stormwater Projects	2022	Ongoing	\$0	\$623	\$239	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$862	\$820	2023	
MG	FY2023 - DSS Stormwater Projects	2023	Ongoing	\$0	\$0	\$640	\$234	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$875	\$845	2024	
NV	FY2024 - DSS Stormwater Projects	2024	Ongoing	\$0	\$0	\$0	\$632	\$238	\$0	\$0	\$0	\$0	\$0	\$0	\$870	\$870	2025	
PI	FY2025 - DSS Stormwater Projects	2025	Ongoing	\$0	\$0	\$0	\$0	\$281	\$615	\$0	\$0	\$0	\$0	\$0	\$896	\$896	2026	
QA	FY2026 - DSS Stormwater Projects	2026	Ongoing	\$0	\$0	\$0	\$0	\$0	\$260	\$570	\$0	\$0	\$0	\$0	\$831	\$923	2027	
T7	FY2028 - DSS Stormwater Projects	2028	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$501	\$380	\$0	\$0	\$881	\$979	2029	
T9	FY2027 - DSS Stormwater Projects	2027	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$272	\$583	\$0	\$0	\$0	\$855	\$950	2028	
U6	FY2029 - DSS Stormwater Projects	2029	New	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$907	\$0	\$0	\$907	\$1,008	2029	
U8	FY2030 - DSS Stormwater Projects	2030	New	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$935	\$900	\$1,835	\$1,039	2031	
<b>TOTAL ON-GOING BUDGETS</b>				<b>\$592</b>	<b>\$1,572</b>	<b>\$899</b>	<b>\$866</b>	<b>\$519</b>	<b>\$876</b>	<b>\$842</b>	<b>\$1,084</b>	<b>\$1,287</b>	<b>\$935</b>	<b>\$900</b>	<b>\$9,780</b>	<b>\$9,994</b>		
PUMPING FACILITIES		Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion	
NG	Stormwater Pumping Station Rehabilitation	2017	Ongoing	\$1,170	\$5,232	\$10,296	\$3,063	\$2,584	\$2,741	\$3,417	\$1,417	\$1,579	\$4,948	\$7,642	\$42,918	\$64,227	2031	
<b>TOTAL PUMPING FACILITIES BUDGETS</b>				<b>\$1,170</b>	<b>\$5,232</b>	<b>\$10,296</b>	<b>\$3,063</b>	<b>\$2,584</b>	<b>\$2,741</b>	<b>\$3,417</b>	<b>\$1,417</b>	<b>\$1,579</b>	<b>\$4,948</b>	<b>\$7,642</b>	<b>\$42,918</b>	<b>\$64,227</b>		
RESEARCH & PROGRAM MANAGEMENT		Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion	
AT	Stormwater Program Management	2001	Ongoing	\$63	\$23	\$35	\$35	\$22	\$18	\$0	\$0	\$0	\$0	\$0	\$133	\$11,678	2026	
RQ	Storm Water Program Management	2025	Ongoing	\$0	\$0	\$0	\$0	\$17	\$212	\$286	\$346	\$275	\$212	\$0	\$1,350	\$1,500	2030	
<b>TOTAL RESEARCH &amp; PROGRAM MANAGEMENT BUDGETS</b>				<b>\$63</b>	<b>\$23</b>	<b>\$35</b>	<b>\$35</b>	<b>\$40</b>	<b>\$230</b>	<b>\$286</b>	<b>\$346</b>	<b>\$275</b>	<b>\$212</b>	<b>\$0</b>	<b>\$1,483</b>	<b>\$13,178</b>		
TRUNK/FORCE SEWERS		Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion	
BO	Future Stormwater Projects	2005	Ongoing	\$6	\$182	\$99	\$78	\$174	\$67	\$0	\$0	\$0	\$0	\$0	\$600	\$15,510	2026	
<b>TOTAL TRUNK/FORCE SEWERS BUDGETS</b>				<b>\$6</b>	<b>\$182</b>	<b>\$99</b>	<b>\$78</b>	<b>\$174</b>	<b>\$67</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$600</b>	<b>\$15,510</b>	
<b>TOTAL STORMWATER BUDGETS</b>				<b>\$1,831</b>	<b>\$7,031</b>	<b>\$11,527</b>	<b>\$5,553</b>	<b>\$5,813</b>	<b>\$4,985</b>	<b>\$6,158</b>	<b>\$4,620</b>	<b>\$4,499</b>	<b>\$6,330</b>	<b>\$8,722</b>	<b>\$65,236</b>	<b>\$120,933</b>		



(\$ in thousands)

FY 2021 Actual	FY 2022 - 2031 CIP Disbursement Plan											Lifetime Budget
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-yr Total	
\$28,204	\$68,084	\$103,383	\$150,828	\$130,967	\$160,400	\$205,946	\$183,824	\$149,256	\$129,368	\$80,069	\$1,362,125	\$2,166,442



**Sewer Rehab (Watts Branch)**



**Rock Creek Stem Sewers (Condition Assessment)**



**Sewer Rehab (Pinehurst exposed sewer)**

## Overview

DC Water is responsible for wastewater collection in the District of Columbia, including operation and maintenance of the sanitary sewer system. The sewer system includes approximately 1,320 miles of large interceptor sewers and smaller gravity collection sewers, for a total of approximately 1,900 miles of combined, separate and stormwater sewers, 50,000 manholes and 25,000 catch basins, 16 stormwater pump stations, and 9 wastewater pump stations. In addition, DC Water is responsible for the 50-mile-long Potomac Interceptor System, which provides conveyance of wastewater from Dulles International Airport, and areas in Virginia and Maryland, to the Blue Plains AWWTP.

### PROGRAM AREAS

**Sanitary Collection System** – Projects to rehabilitate sanitary sewer pipes based on the findings of inspection and assessment conducted on these assets.

**On-Going** – Urgent projects managed by the Department of Sewer Services including the replacement of sewer laterals, sewer mains, inspection and cleaning of sewer laterals and mains.

**Pumping Facilities** – Projects required for the upgrade of existing wastewater pump stations, as well as projects for the engineering and construction of new wastewater pumping facilities to enhance the reliability and integrity of DC Water’s sanitary sewer system.

**Program Management** – Engineering program management services for the sewer system capital improvement program, including assessing system needs, developing facilities plans, developing design scopes of work, preparing cost estimates, preparing task orders or agreements, and reviewing design documents.

**Interceptor/Trunk Force Sewers** – The rehabilitation of large diameter sewers that have reached the end of their useful life or are in need of major rebuild or refurbishment.

## ACCOMPLISHMENTS

- Progressive design-build contractor for the rehabilitation of Potomac Interceptor between Manhole 31 and Manhole 30 finalized 60 percent design. Phase 2 contract was submitted for Board approval, and construction is scheduled to start in FY 2022.
- The rehabilitation of the Potomac Interceptor crossing Route 7, done in coordination with Virginia Department of Transportation, as part of their Route 7 improvements project.
- An emergency contract to rehabilitate an aerial sewer crossing in the National Arboretum for a 51-inch sewer that was in danger of being damaged by continuing erosion of the stream underneath was completed.
- Notice to Proceed for the Soapstone Sewer rehabilitation project was issued.
- Major Potomac Interceptor projects currently in design:
  - Phase 2 Rehabilitation at Potomac River Crossing
  - Phase 4 Rehabilitation at Fairfax and Loudoun Counties
  - Phase 6 Rehabilitation at Clara Barton Parkway
  - Cabin John Rehabilitation
  - Manhole Rehabilitation
- Nicholson Sewer System Evaluation Study (SSES)
  - Completed 100% of field work (smoke testing, flow metering, and CCTV inspection)
  - Hydraulic modeling is ongoing
- Northeast sewer system evaluation survey including smoke testing, flow meter, CCTV inspection and others is on-going.
- September 10, 2020 Flooding Response
  - Reviewed 494 applications for backwater valve rebates
  - Processed and reimbursed over 139 rebates
- Other major sewer projects currently in design include
  - Fenwick Branch Sewer Rehabilitation
  - Norman Stone Sewer Rehabilitation
- Local sewer projects currently in design:
  - Service Life Restoration Program Phase 2, 4 and 5
  - Local Sewer Rehab 5-2
- Completed the following condition assessment projects:
  - Potomac Force Mains - inspection completed (3.25 miles)
  - Rock Creek Siphons - inspection completed (500 linear feet)
  - Anacostia Siphons - inspection completed (total length 0.91 miles)
  - Potomac Interceptor - inspection completed (23 miles and 118 manholes)
  - Anacostia Force Main/Gravity Sewer - inspection in progress
  - Lower Eastside Interceptor - inspection completed (2.05 miles)

## ACCOMPLISHMENTS CONTINUED

- Extensive coordination continues with DDOT’s South Capitol Street Bridge project to protect critical sewer assets:
  - Completed construction on Main Pump Station Hardening Improvements to protect this critical infrastructure from 100-year storm plus approximately 3 feet.
  - Installed influent new screens at Main and O Street Pump Stations. These screens protect critical equipment in the pump station from accelerated wear and disruption of service.
  - Completed installation of a new seal water pump protection system at Potomac Pump Station.
  
- Extensive coordination with DDOT Benning Road Reconstruction and Streetcar project:
  - Review of DDOT design drawing to identify possible conflicts with existing sewer assets
  - Conduct hydraulic modeling analysis and evaluate proposed relocation of sewer mains

## OPERATIONAL IMPACT OF MAJOR CAPITAL PROGRAMS

**Pump Stations** – Continued improvements and other upgrades will ensure proper operations of the pump stations to improve reliability and maintain compliance with regulatory requirements and customer expectations.

**Ongoing and Local Sewer Rehabilitation** – Renewal of small diameter sewer infrastructure will reduce emergency rehabilitations and maintenance demands for these neighborhood sewers.

**Major Sewer Rehabilitation** – Renewal of major sewers will reduce emergency rehabilitation and maintenance demands for these sewer



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SANITARY COLLECTION SYSTEM		Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion
G1	Small Local Sewer Rehabilitation 1	2010	Ongoing	\$3	\$123	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$123	\$29,172	2022
GA	Small Local Sewer Rehabilitation 4	2014	Ongoing	\$1	\$20	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20	\$9,074	2022
J3	Sewer Upgrade - City Wide	2000	Ongoing	\$1,949	\$646	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$646	\$18,391	2022
JX	Sanitary Sewer Rehabilitation 10	2016	Ongoing	\$0	\$311	\$913	\$6,703	\$3,660	\$0	\$0	\$0	\$0	\$0	\$0	\$11,587	\$13,607	2025
QS	Local Sewer Rehabilitation 5	2020	Ongoing	\$0	\$456	\$3,248	\$15,518	\$15,853	\$4,875	\$0	\$0	\$0	\$0	\$0	\$39,949	\$45,004	2026
QT	Local Sewer Rehabilitation 6	2024	Ongoing	\$0	\$0	\$0	\$841	\$3,941	\$17,149	\$19,872	\$7,558	\$0	\$0	\$0	\$49,362	\$63,846	2028
QU	Local Sewer Rehabilitation 7	2026	Ongoing	\$0	\$0	\$0	\$0	\$0	\$725	\$3,927	\$21,460	\$26,354	\$8,483	\$0	\$60,948	\$71,964	2030
QW	Local Sewer Rehabilitation 8	2028	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$936	\$5,071	\$17,787	\$26,646	\$50,440	\$119,100	2036
QX	Local Sewer Assessment 1	2020	Ongoing	\$18	\$391	\$2,623	\$2,507	\$2,238	\$0	\$0	\$0	\$0	\$0	\$0	\$7,759	\$8,264	2025
QY	Local Sewer Rehabilitation 2	2023	Ongoing	\$0	\$0	\$1,363	\$1,302	\$1,169	\$0	\$0	\$0	\$0	\$0	\$0	\$3,834	\$4,000	2025
QZ	Local Sewer Assessment 3	2026	Ongoing	\$0	\$0	\$0	\$0	\$0	\$3,040	\$3,040	\$3,429	\$3,420	\$3,420	\$3,411	\$19,760	\$24,000	2031
RG	Local Sewer Rehabilitation 9	2024	Ongoing	\$0	\$0	\$0	\$827	\$3,173	\$11,724	\$13,073	\$14,561	\$12,026	\$1,448	\$0	\$56,833	\$70,000	2030
T4	District Energy Buzzard Point	2025	New	\$0	\$0	\$0	\$0	\$4,500	\$9,200	\$10,800	\$0	\$0	\$0	\$0	\$24,500	\$30,000	2027
<b>TOTAL SANITARY COLLECTION SYSTEM BUDGETS</b>				<b>\$1,972</b>	<b>\$1,948</b>	<b>\$8,147</b>	<b>\$27,697</b>	<b>\$34,534</b>	<b>\$46,713</b>	<b>\$50,712</b>	<b>\$47,945</b>	<b>\$46,871</b>	<b>\$31,138</b>	<b>\$30,057</b>	<b>\$325,762</b>	<b>\$506,422</b>	
ON-GOING		Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion
H6	FY2018 - DSS Sanitary Sewer Projects	2018	Ongoing	\$93	\$140	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$140	\$12,335	2022
HN	FY2019 - DSS Sanitary Sewer Projects	2019	Ongoing	\$2,091	\$73	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$73	\$12,200	2022
J1	FY2020 - DSS Sanitary Sewer Projects	2020	Ongoing	\$4,745	\$3,266	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,266	\$12,568	2022
LN	FY2021 - DSS Sanitary Sewer Projects	2021	Ongoing	\$5,916	\$1,127	\$236	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,363	\$12,945	2023
M9	FY2022 - DSS Sanitary Sewer Projects	2021	Ongoing	\$261	\$11,010	\$1,487	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,497	\$13,335	2023
MF	FY2023 - DSS Sanitary Sewer Projects	2023	Ongoing	\$0	\$0	\$11,313	\$1,659	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,972	\$13,735	2024
NW	FY2024 - DSS Sanitary Sewer Projects	2024	Ongoing	\$0	\$0	\$0	\$12,793	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,793	\$14,225	2024
OX	FY2025 - DSS Sanitary Sewer Projects	2025	Ongoing	\$0	\$0	\$0	\$0	\$13,185	\$0	\$0	\$0	\$0	\$0	\$0	\$13,185	\$14,650	2025
PZ	FY2026 - DSS Sanitary Sewer Projects	2025	Ongoing	\$0	\$0	\$0	\$0	\$15	\$13,562	\$0	\$0	\$0	\$0	\$0	\$13,577	\$15,090	2026
Q3	FY2003 - DSS Sanitary Sewer Projects	2003	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,784	2021
T6	FY2028 - DSS Sanitary Sewer Projects	2027	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$8	\$14,387	\$0	\$0	\$0	\$14,395	\$16,020	2028
T8	FY2027 - DSS Sanitary Sewer Projects	2026	Ongoing	\$0	\$0	\$0	\$0	\$0	\$15	\$13,980	\$0	\$0	\$0	\$0	\$13,995	\$15,550	2027
U7	FY2029 - DSS Sewer Sanitary Projects	2028	New	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8	\$14,843	\$0	\$0	\$14,851	\$16,501	2029
U9	FY2030 - DSS Stormwater Projects	2029	New	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8	\$15,289	\$0	\$15,297	\$16,997	2030
UH	FY2031 - DSS Sewer Sanitary Projects	2029	New	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8	\$15,289	\$15,297	\$16,997	2032
<b>TOTAL ON-GOING BUDGETS</b>				<b>\$13,106</b>	<b>\$15,617</b>	<b>\$13,035</b>	<b>\$14,452</b>	<b>\$13,200</b>	<b>\$13,577</b>	<b>\$13,988</b>	<b>\$14,395</b>	<b>\$14,851</b>	<b>\$15,297</b>	<b>\$15,289</b>	<b>\$143,702</b>	<b>\$215,932</b>	



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PUMPING FACILITIES		Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion
CX	Sewer Facilities Security Upgrades	2010	Ongoing	\$110	\$36	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$36	\$1,429	2022
GZ	Sewer Instrumentation & Control	2012	Ongoing	\$0	\$560	\$725	\$866	\$309	\$0	\$0	\$0	\$0	\$0	\$0	\$2,460	\$9,143	2025
LY	Sewer Facilities Security Upgrades	2020	Ongoing	\$58	\$164	\$154	\$87	\$11	\$0	\$0	\$0	\$0	\$0	\$0	\$416	\$2,000	2025
MB	3rd Street & Constitution Ave NW - Pumping Station	2014	Ongoing	\$0	\$0	\$2,004	\$2,813	\$197	\$0	\$0	\$0	\$0	\$0	\$0	\$5,014	\$7,501	2025
MC	Additional Sewer SCADA System Sites	2015	Ongoing	\$222	\$453	\$1,820	\$1,754	\$530	\$0	\$0	\$0	\$0	\$0	\$0	\$4,557	\$8,120	2025
PM	East Side Pumping Station	2019	Ongoing	\$108	\$438	\$306	\$1,973	\$832	\$0	\$0	\$0	\$0	\$0	\$0	\$3,549	\$4,256	2025
PT	Existing Sewer Facilities Building Optimization	2020	Ongoing	\$0	\$0	\$16	\$65	\$165	\$335	\$0	\$0	\$0	\$0	\$0	\$581	\$705	2026
RH	Sewer Pump Stations Upgrades	2020	Ongoing	\$56	\$844	\$3,844	\$2,093	\$2	\$0	\$0	\$0	\$0	\$0	\$0	\$6,782	\$8,100	2025
RS	Sewer Pump Station Upgrades 2	2026	Ongoing	\$0	\$0	\$0	\$0	\$0	\$3,425	\$4,862	\$17,537	\$25,374	\$32,219	\$19,304	\$102,719	\$150,720	2032
RT	Sewer Pump Station Upgrades 3	2027	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$1,355	\$4,496	\$5,095	\$3,553	\$1,261	\$15,760	\$24,034	2035
RU	Sewer Pump Station Upgrades - Pumps & VFDs	2022	Ongoing	\$0	\$3	\$2,026	\$3,916	\$6,107	\$7,199	\$6,071	\$3,153	\$0	\$0	\$0	\$28,476	\$35,950	2028
<b>TOTAL PUMPING FACILITIES BUDGETS</b>				<b>\$554</b>	<b>\$2,496</b>	<b>\$10,895</b>	<b>\$13,566</b>	<b>\$8,153</b>	<b>\$10,959</b>	<b>\$12,288</b>	<b>\$25,186</b>	<b>\$30,469</b>	<b>\$35,772</b>	<b>\$20,565</b>	<b>\$170,349</b>	<b>\$251,957</b>	
PROGRAM MANAGEMENT		Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion
AU	Sanitary Sewer Program Management	2001	Ongoing	\$753	\$4,157	\$5,091	\$4,865	\$2,833	\$1,789	\$0	\$0	\$0	\$0	\$0	\$18,735	\$65,441	2026
AV	Combined Sewer Overflow Program Management	2001	Ongoing	\$913	\$1,089	\$3,249	\$4,077	\$4,529	\$3,657	\$2,787	\$0	\$0	\$0	\$0	\$19,388	\$57,756	2027
DN	Sewer Inspection Program	2010	Ongoing	\$995	\$3,224	\$1,975	\$596	\$535	\$535	\$535	\$376	\$350	\$350	\$151	\$8,627	\$27,843	2031
QH	Sanitary Sewer Program Management FY26-30	2026	Ongoing	\$0	\$0	\$0	\$0	\$0	\$2,900	\$3,717	\$4,725	\$4,010	\$2,900	\$469	\$18,720	\$20,800	2031
RP	CSO Program Management	2026	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$2,877	\$3,786	\$4,675	\$3,778	\$2,877	\$17,992	\$20,000	2031
<b>TOTAL PROGRAM MANAGEMENT BUDGETS</b>				<b>\$2,662</b>	<b>\$8,471</b>	<b>\$10,316</b>	<b>\$9,538</b>	<b>\$7,897</b>	<b>\$8,880</b>	<b>\$9,915</b>	<b>\$8,887</b>	<b>\$9,034</b>	<b>\$7,028</b>	<b>\$3,497</b>	<b>\$83,462</b>	<b>\$191,840</b>	



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INTERCEPTOR/TRUNK FORCE	Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion
A4 Future Sewer System Upgrades	2004	Ongoing	\$468	\$2,858	\$4,374	\$1,154	\$1,098	\$429	\$0	\$0	\$0	\$0	\$0	\$9,913	\$46,035	2025
DR Low Area Trunk Sewer Rehabilitation	2007	Ongoing	\$2,244	\$206	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$206	\$23,112	2022
FW Rehab Piney Branch Trunk Sewer	2011	Ongoing	\$47	\$855	\$1,005	\$12,932	\$9,968	\$0	\$0	\$0	\$0	\$0	\$0	\$24,761	\$30,668	2025
G2 Sewer Structure Rehabilitation 1	2010	Ongoing	\$0	\$109	\$831	\$1,637	\$100	\$0	\$0	\$0	\$0	\$0	\$0	\$2,677	\$9,325	2024
G5 Sewer Rehab Near Creek Beds	2010	Ongoing	\$670	\$5,125	\$8,207	\$2,941	\$881	\$4,336	\$12,719	\$10,338	\$4,201	\$1,518	\$0	\$50,264	\$74,265	2030
G6 Sanitary Sewers Under Buildings 1	2010	Ongoing	\$5	\$0	\$0	\$894	\$2,151	\$0	\$0	\$0	\$0	\$0	\$0	\$3,044	\$6,805	2025
GH Large Sewer Rehabilitation 3	2012	Ongoing	\$11	\$543	\$1,631	\$10,575	\$7,042	\$605	\$0	\$0	\$0	\$0	\$0	\$20,396	\$24,332	2026
HS Rehabilitation of Influent Sewers	2022	Ongoing	\$0	\$0	\$0	\$2,510	\$182	\$0	\$414	\$1,600	\$4,679	\$15,011	\$4,464	\$28,860	\$37,430	2030
HT Rehabilitation of Anacostia Force Main	2012	Ongoing	\$23	\$1,312	\$292	\$0	\$0	\$0	\$0	\$54	\$266	\$300	\$268	\$2,492	\$11,376	2032
IF Sanitary Sewer Rehabilitation 2	2015	Ongoing	\$0	\$119	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$119	\$1,594	2022
IK Potomac Force Main Rehabilitation	2012	Ongoing	\$448	\$347	\$0	\$59	\$177	\$110	\$181	\$338	\$1,460	\$762	\$0	\$3,436	\$6,127	2030
IL Creekbed Sewer Rehabilitation 2	2013	Ongoing	\$203	\$2,602	\$2,493	\$3,073	\$3,983	\$4,809	\$3,773	\$1,794	\$0	\$0	\$0	\$22,526	\$60,724	2032
IM Creekbed Sewer Rehabilitation 3	2013	Ongoing	\$0	\$134	\$517	\$412	\$711	\$2,258	\$6,796	\$790	\$254	\$1,162	\$2,231	\$15,265	\$23,993	2031
IN Upper East Side Trunk Sewer Rehabilitation	2012	Ongoing	\$0	\$229	\$1,018	\$614	\$868	\$1,809	\$8,493	\$1,500	\$0	\$0	\$0	\$14,531	\$19,044	2027
JO B Street New Jersey Avenue Trunk Sewer Rehab	2004	Ongoing	\$950	\$1,086	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,086	\$18,074	2022
LZ Potomac Interceptor Projects - Rehab. Phase 2	2015	Ongoing	\$4,648	\$18,518	\$30,295	\$33,474	\$25,111	\$31,737	\$25,479	\$10,505	\$4,999	\$177	\$0	\$180,294	\$226,964	2030
N7 Potomac Sewer System Rehabilitation	2000	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$48,684	2020
PJ Re-Activation of Anacostia Force Main/Gravity Main as Relief to Anacostia Force Main	2018	Ongoing	\$3	\$596	\$288	\$1,056	\$2,038	\$8,950	\$3,338	\$0	\$0	\$0	\$0	\$16,266	\$20,001	2027
RA Major Sewer Assessment and Heavy Cleaning 1	2021	Ongoing	\$104	\$2,738	\$6,371	\$3,307	\$2,713	\$112	\$0	\$0	\$0	\$0	\$0	\$15,240	\$15,800	2026
RB Major Sewer Assessment and Heavy Cleaning 2	2026	Ongoing	\$0	\$0	\$0	\$0	\$0	\$3,423	\$3,360	\$3,360	\$138	\$0	\$0	\$10,281	\$14,100	2029
RC Major Sewer Rehabilitation 1	2020	Ongoing	\$86	\$1,633	\$2,582	\$9,277	\$5,800	\$6,437	\$10,112	\$14,591	\$4,868	\$3,175	\$0	\$58,475	\$73,298	2034
RD Major Sewer Rehabilitation 2	2021	Ongoing	\$0	\$544	\$1,086	\$1,022	\$1,493	\$9,246	\$28,027	\$14,944	\$2,068	\$0	\$0	\$58,431	\$75,783	2029
RE Major Sewer Rehabilitation 3	2024	Ongoing	\$0	\$0	\$0	\$637	\$2,869	\$6,009	\$16,352	\$19,172	\$11,743	\$8,357	\$1,148	\$66,287	\$88,255	2031
RJ Creekbed Sewer Rehabilitation 4	2028	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,266	\$8,207	\$4,527	\$0	\$16,000	\$22,000	2030
RL Potomac Interceptor Projects - Rehab Phase 3	2029	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,159	\$5,145	\$5,145	\$2,551	\$18,000	\$22,500	2032
<b>TOTAL INTERCEPTOR/TRUNK FORCE SEWER BUDGETS</b>			<b>\$9,910</b>	<b>\$39,553</b>	<b>\$60,990</b>	<b>\$85,574</b>	<b>\$67,184</b>	<b>\$80,271</b>	<b>\$119,043</b>	<b>\$87,412</b>	<b>\$48,030</b>	<b>\$40,133</b>	<b>\$10,662</b>	<b>\$638,851</b>	<b>\$1,000,291</b>	
<b>TOTAL SANITARY SEWER BUDGETS</b>			<b>\$28,204</b>	<b>\$68,084</b>	<b>\$103,383</b>	<b>\$150,828</b>	<b>\$130,967</b>	<b>\$160,400</b>	<b>\$205,946</b>	<b>\$183,824</b>	<b>\$149,256</b>	<b>\$129,368</b>	<b>\$80,069</b>	<b>\$1,362,125</b>	<b>\$2,166,442</b>	

(\$ in thousands)

FY 2021 Actual	FY 2022 - 2031 CIP Disbursement Plan											Lifetime Budget
	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-yr Total	
\$57,279	\$165,313	\$227,116	\$218,339	\$194,652	\$202,046	\$191,451	\$192,665	\$192,324	\$124,683	\$120,842	\$1,829,430	\$3,167,891



**Soldier's Home Reservoir Upgrades**



**Small Diameter Water Main Repair**



**Small Diameter Water Main Florida Avenue & Sherman Avenue NW**

## Overview

Delivery of safe, clean, high-quality drinking water is one of DC Water's highest priorities. Drinking water in the District of Columbia comes from the Potomac River. The U.S. Army Corps of Engineers, Washington Aqueduct (Aqueduct), is a federally owned agency responsible for treating the drinking water. DC Water purchases water from the Aqueduct and is responsible for maintaining the distribution system that delivers drinking water to customers. DC Water distributes drinking water through roughly 1,300 miles of interconnected pipes to more than 700,000 residents and businesses in the District of Columbia.

The DC Water distribution system begins at the water treatment plant and ends at private service lines. Customer service lines connect to the mains in the streets and deliver water to residents and commercial buildings, eventually reaching taps. Water is continuously moving through our distribution system, typically at a flow rate that keeps the water fresh. However, once the water leaves the main and enters a customer's service line, the flow of water is dependent on individual water usage.

DC Water is committed to providing customers with the highest quality drinking water and continuously works to deliver water that goes beyond federal standards. We accomplish this goal by aiming to meet target levels that are stricter than water quality standards required by the EPA. We have a dedicated Drinking Water division that collects and analyzes water samples throughout the District of Columbia. These monitoring programs include sampling and analyses that are required by EPA and additional sampling programs conducted voluntarily by DC Water.

DC Water conducts compliance monitoring on a daily basis to ensure that water quality meets EPA standards. Water quality technicians collect and analyze samples for lead and copper, total coliform (bacteria) and disinfection byproduct levels. Compliance monitoring ensures that drinking water treatment effectively prevents pipe corrosion, removes bacteria and other contaminants, and minimizes potentially harmful treatment byproducts.

DC Water operates voluntary sampling programs to support our commitment to providing high-quality drinking water to our customers. Water quality technicians collect and analyze hundreds of water samples throughout the District of Columbia. The Drinking Water division responds quickly to customer complaints and conducts water quality monitoring among the District's most vulnerable populations. DC Water operates two mobile laboratories that allow technicians to conduct on-site water quality tests and respond to emergencies. The Drinking Water division also distributes hundreds of lead test kits each year to residents and assists residents with identifying lead sources.

## PROGRAM AREAS

***Distribution Systems*** – Provides for the rehabilitation, replacement or extension of the water distribution system through several projects. The distribution system program area is the largest program for the water service area and includes three primary elements: small diameter water main renewal, large diameter water main rehabilitation, and DDOT project relocation needs.

***Lead Free DC Program*** – This program is for the removal of all lead service lines in public and private right of way with copper piping by 2030. The replacement continues throughout the water distribution system as part of water main renewal projects, emergency rehabilitation of water service lines, and for customers that request full replacement as part of the Voluntary Lead Service Replacement (LSR) Program.

***On-Going*** – Includes small projects for urgent rehabilitation of water main breaks, valves and fire hydrants, water service connections, and other minor water main rehabilitation work.

***Pumping Facilities*** – Rehabilitate or upgrade water-pumping stations in the system. All four water pump stations have completed major upgrades within the last fifteen years, and only minor projects are anticipated for the near future.

***Storage Facilities*** – Rehabilitation or upgrade of elevated tanks and reservoirs. Studies to the system have identified the need for upgrades and/or new storage facilities to support changing development patterns, for regulatory compliance, to provide additional water pressure to certain areas of the District, and to provide redundant service during unplanned outages.

***DDOT*** – Projects for the relocation, rehabilitation, replacement and extension of water mains, for which the work is completed under the District of Columbia's District Department of Transportation (DDOT) construction contracts for street paving or reconstruction. This program is being closed and combined with distribution projects.

***Program Management*** – Provides engineering program management services for the drinking water system capital improvements program, including asset management, developing facilities plans, advancement of the smart infrastructure program, conceptual designs, design scopes of work, cost estimates, and design document review.



## ACCOMPLISHMENTS

- Continued installation of small diameter water mains to meet the DC Water Board goal of renewing one percent of the system annually. This renewal includes a combination of replacement with new water mains to reduce water quality degradation from tuberculation, reduce the likelihood of water main breaks and increase the service life the of the water distribution system.
- Replaced approximately seven miles of small diameter water mains.
- Completed design and started construction for the rehabilitation of the N Street 66/72-inch Prestressed Concrete Cylinder Pipe (PCCP).
- The following major projects are in design:
  - Dead Ends Large Diameter Water Main Elimination
  - Rehabilitation of Water Mains on Bridges Contract 2
- Extensive coordination continues with DDOT’s South Capitol Street Bridge project to relocate water mains and protect critical transmission mains.
- Completed construction of upgrade and rehabilitation of the Soldiers Home Reservoir. This project corrected several deficiencies identified during an EPA annual sanitary survey ahead of EPA’s deadline and made several other improvements to the reservoir which was originally construction in 1939.
- Released the Lead Free DC Plan in June 2021 which outlines a phased in approach to eliminate all lead service lines by 2030.
- Completed Phase I (FY 2020-FY 2021) of the plan and partnered with the District to replace 1,400 lead lines over that period saving customers \$2 million in private-side replacement costs.
- Completed 847 lead service line replacements, exceeding the target of 800.
- Selected and began design and permitting for 150 blocks across the city for FY 2022 Block-by-Block lead replacement projects using an equity-based model that prioritizes replacements for vulnerable populations and under-resourced areas.
- Procurement developed change order contracts and selected Indefinite Delivery Indefinite Quantity (IDIQ) contractors to provide over \$30 million in replacement services for the Capital Improvement Project and Emergency Repair Replacement (CIPERR) By-Block Program

## OPERATIONAL IMPACT OF MAJOR CAPITAL PROGRAMS

**Water Mains** – The capital improvement program for linear assets will help to:

- Reduce customer’s impacts due to pipe breaks.
- Decrease reactive maintenance due to breaks and other unscheduled rehabilitations thereby lowering maintenance costs over time.
- Improve water quality in the distribution system.
- Reduce lead service pipes inventory there by reducing of lead exposure.

**Water Pumping and Storage** – The upgrades completed in FY 2021 to the Soldiers Home Reservoir ensures regulatory compliance and a number of operational improvements. The Bryant Street Spill Header Improvement project is under design and will provide major operational improvements for the pump station. We are continuing with minor pump station and storage facilities upgrades and improvements which will reduce maintenance cost and avoid the need for major upgrades later.



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(\$ in thousands)

DISTRIBUTION SYSTEMS		Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion
C9	Large Diameter Water Mains I	2014	Ongoing	\$818	\$2,007	\$2,835	\$1,128	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,970	\$20,532	2024
DE	Small Diameter Water Main Rehabilitation 12	2014	Ongoing	\$2,434	\$2,442	\$8,053	\$1,029	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,523	\$49,423	2024
F1	Small Diameter Water Main Rehabilitation 13	2014	Ongoing	\$14,333	\$9,218	\$2,620	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,838	\$41,565	2023
F2	Small Diameter Water Main Rehabilitation 14	2017	Ongoing	\$2,159	\$25,667	\$15,162	\$3,199	\$685	\$259	\$89	\$0	\$0	\$0	\$0	\$45,060	\$59,466	2027
F6	Steel Water Main Rehabilitation - Rehabilitation I	2009	Ongoing	\$0	\$108	\$248	\$3,579	\$1,876	\$0	\$0	\$0	\$0	\$0	\$0	\$5,812	\$12,139	2025
FT	Water Mains Rehabilitation Phase II	2014	Ongoing	\$708	\$9,903	\$5,757	\$8,099	\$1,719	\$893	\$640	\$59	\$0	\$0	\$0	\$27,069	\$35,772	2028
GQ	Fire Hydrant Replacement Program - Phase II	2010	Ongoing	\$2,454	\$2,669	\$1,941	\$1,804	\$1,529	\$1,529	\$0	\$0	\$0	\$0	\$0	\$9,473	\$29,120	2026
GR	Small Diameter Water Main Rehabilitation 15	2018	Ongoing	\$74	\$18,959	\$26,916	\$2,089	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$47,964	\$52,000	2024
HX	Small Diameter Water Main Rehabilitation 16	2018	Ongoing	\$132	\$3,705	\$30,624	\$16,635	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$50,964	\$62,305	2024
I8	Large Valve Replacement (Contract 11-13)	2012	Ongoing	\$176	\$436	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$436	\$19,701	2022
JZ	Large Diameter Water Main Replacement 3 - 4 & 5	2021	Ongoing	\$30	\$856	\$4,640	\$5,937	\$11,364	\$23,913	\$13,158	\$1,802	\$149	\$22	\$0	\$61,840	\$81,320	2030
K7	Large Diameter Water Main Replacement 6 - 7 & 8	2024	Ongoing	\$0	\$0	\$0	\$581	\$1,974	\$8,897	\$18,472	\$18,922	\$12,396	\$2,609	\$0	\$63,850	\$89,140	2030
K8	Large Diameter Water Main Replacement 9 - 10 & 11	2027	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$422	\$1,602	\$7,181	\$14,936	\$16,188	\$40,329	\$76,400	2033
KE	Small Diameter Water Main Rehabilitation 18	2020	Ongoing	\$533	\$772	\$1,173	\$23,322	\$8,726	\$344	\$181	\$0	\$0	\$0	\$0	\$34,517	\$48,147	2027
KF	Small Diameter Water Main Rehabilitation 19	2022	Ongoing	\$16	\$904	\$357	\$2,075	\$26,912	\$15,319	\$3,353	\$0	\$0	\$0	\$0	\$48,920	\$59,950	2027
KG	Small Diameter Water Main Rehabilitation 20	2022	Ongoing	\$0	\$106	\$511	\$1,026	\$1,205	\$1,610	\$1,832	\$16,775	\$21,165	\$4,765	\$0	\$48,996	\$63,440	2030
KH	Small Diameter Water Main Rehabilitation 21	2022	Ongoing	\$0	\$27	\$362	\$890	\$2,250	\$29,084	\$19,143	\$0	\$0	\$0	\$0	\$51,755	\$64,547	2027
KI	Small Diameter Water Main Rehabilitation 22	2023	Ongoing	\$0	\$0	\$34	\$376	\$786	\$3,110	\$29,472	\$18,307	\$0	\$0	\$0	\$52,086	\$66,553	2028
KJ	Small Diameter Water Main Rehabilitation 23	2024	Ongoing	\$0	\$0	\$0	\$33	\$321	\$793	\$3,155	\$28,369	\$18,546	\$0	\$0	\$51,218	\$67,760	2029
KK	Small Diameter Water Main Rehabilitation 24	2025	Ongoing	\$0	\$0	\$0	\$0	\$28	\$324	\$799	\$2,237	\$29,581	\$19,139	\$0	\$52,108	\$69,178	2030
KL	Small Diameter Water Main Rehab 25	2027	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$77	\$698	\$4,676	\$32,768	\$21,297	\$59,517	\$79,378	2032
MV	Small Diameter Water Main Rehabilitation 3	2006	Ongoing	\$2	\$40	\$99	\$442	\$1,060	\$403	\$0	\$0	\$0	\$0	\$0	\$2,045	\$15,677	2026
O1	Small Diameter Water Main Rehabilitation 9	2012	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$26,423	2021
O2	Small Diameter Water Main Rehabilitation 10	2013	Ongoing	\$1,344	\$2,615	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,615	\$38,877	2022
O3	Small Diameter Water Main Rehabilitation 11	2014	Ongoing	\$107	\$637	\$6	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$643	\$42,399	2023
QF	District Metering	2023	Ongoing	\$0	\$0	\$582	\$1,064	\$1,109	\$1,006	\$1,138	\$915	\$659	\$420	\$580	\$7,472	\$9,930	2031
S3	Large Valve Replacement (Contract 3-7)	1999	Ongoing	\$469	\$64	\$116	\$193	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$372	\$23,207	2024
U5	WSSC Interconnection Project	2022	New	\$0	\$211	\$700	\$3,699	\$3,583	\$1,545	\$0	\$0	\$0	\$0	\$0	\$9,738	\$11,949	2026
KM	Small Diameter Water Main Rehab 26	2027	New	\$0	\$0	\$0	\$0	\$0	\$0	\$137	\$1,477	\$3,339	\$5,216	\$41,139	\$51,308	\$103,034	2033
KN	Small Diameter Water Main Rehab 27	2028	New	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$60	\$690	\$1,644	\$4,505	\$6,900	\$112,905	2031
K9	Large Diameter Water Main Replacement 12 - 13 & 14	2031	New	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$435	\$1,747	\$2,181	\$83,480	2031
KP	Small Diameter Water Main Rehab 28	2029	New	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$106	\$302	\$1,096	\$0	\$1,503	\$104,200	2031
KC	Large Valve Replacement Contracts 26 - 27 & 28	2027	New	\$0	\$0	\$0	\$0	\$0	\$0	\$67	\$348	\$2,482	\$4,738	\$4,569	\$12,204	\$20,980	2031
KD	Large Valve Replacement Contracts 29 - 30 & 31	2030	New	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$70	\$380	\$450	\$22,970	2031
<b>TOTAL DISTRIBUTION SYSTEMS BUDGETS</b>				<b>\$25,789</b>	<b>\$81,345</b>	<b>\$102,737</b>	<b>\$77,198</b>	<b>\$65,128</b>	<b>\$89,029</b>	<b>\$92,136</b>	<b>\$91,572</b>	<b>\$100,969</b>	<b>\$87,062</b>	<b>\$91,501</b>	<b>\$878,678</b>	<b>\$1,763,865</b>	



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LEAD PROGRAM			Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion
BW	Lead Free DC Program	2003	Ongoing	\$8,253	\$11,847	\$16,219	\$15,194	\$12,468	\$12,746	\$11,932	\$12,164	\$12,118	\$5,134	\$0	\$0	\$109,821	\$298,958	2030
ST	Lead Free DC Project	2022	New	\$0	\$45,140	\$78,158	\$86,761	\$88,156	\$69,401	\$50,475	\$50,585	\$50,432	\$21	\$0	\$0	\$519,130	\$513,558	2030
<b>TOTAL LEAD PROGRAM BUDGETS</b>					<b>\$8,253</b>	<b>\$56,987</b>	<b>\$94,377</b>	<b>\$101,955</b>	<b>\$100,624</b>	<b>\$82,147</b>	<b>\$62,407</b>	<b>\$62,749</b>	<b>\$62,550</b>	<b>\$5,155</b>	<b>\$0</b>	<b>\$628,951</b>	<b>\$812,516</b>	
ON-GOING			Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion
D5	FY 2014 - DWS Water Projects	2014	Ongoing	\$0	\$105	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$105	\$10,248	2022
HY	FY 2019 - DWS Water Projects	2019	Ongoing	\$0	\$288	\$37	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$325	\$9,631	2023
JA	FY 2020 - DWS Water Projects	2020	Ongoing	\$6,338	\$148	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$148	\$15,070	2022
KW	FY 2021 - DWS Water Projects	2021	Ongoing	\$8,434	\$2,277	\$21	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,298	\$11,830	2023
KX	FY 2022 - DWS Water Projects	2022	Ongoing	\$0	\$12,098	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,098	\$11,664	2022
KZ	FY 2023 - DWS Water Projects	2023	Ongoing	\$0	\$0	\$13,711	\$35	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,746	\$13,150	2024
KY	FY 2024 - DWS Water Projects	2024	Ongoing	\$0	\$0	\$0	\$14,224	\$36	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$14,260	\$14,452	2025
L1	FY 2025 - DWS Water Projects	2025	Ongoing	\$0	\$0	\$0	\$0	\$14,280	\$30	\$0	\$0	\$0	\$0	\$0	\$0	\$14,310	\$14,780	2026
L2	FY 2026 - DWS Water Projects	2026	Ongoing	\$0	\$0	\$0	\$0	\$0	\$14,360	\$0	\$0	\$0	\$0	\$0	\$0	\$14,360	\$15,890	2026
L6	FY 2027 - DWS Water Projects	2027	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$16,670	\$0	\$0	\$0	\$0	\$0	\$16,670	\$18,250	2027
L7	FY2028 - DWS Water Projects	2028	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$17,818	\$0	\$0	\$0	\$0	\$17,818	\$19,575	2028
QJ	DDCS Water Pumping and Storage Projects FY19-21	2020	Ongoing	\$0	\$0	\$1,685	\$1,611	\$1,453	\$999	\$999	\$1,002	\$1,000	\$1,000	\$1,000	\$1,000	\$10,749	\$10,921	2031
QK	DDCS Water Pumping and Storage Projects FY22-28	2022	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	2028
L8	FY2029 - DWS Water Projects	2029	New	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$19,500	\$0	\$0	\$0	\$19,500	\$21,000	2029
L9	FY2030 - DWS Water Projects	2030	New	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$20,500	\$0	\$0	\$20,500	\$22,000	2030
LA	FY2031 - DWS Water Projects	2031	New	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$19,781	\$0	\$19,781	\$23,500	2031
<b>TOTAL ON-GOING BUDGETS</b>					<b>\$14,772</b>	<b>\$14,917</b>	<b>\$15,454</b>	<b>\$15,870</b>	<b>\$15,769</b>	<b>\$15,390</b>	<b>\$17,669</b>	<b>\$18,819</b>	<b>\$20,500</b>	<b>\$21,500</b>	<b>\$20,781</b>	<b>\$176,668</b>	<b>\$231,960</b>	
PUMPING FACILITIES			Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion
AY	Upgrades to Fort Reno Pumping Station	2002	Ongoing	\$236	\$578	\$56	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$633	\$14,473	2023
FD	Water Facility Security System Upgrades	2010	Ongoing	\$44	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,137	2021
HI	Bryant Street Pump Station Phase III	2027	Ongoing	\$0	\$0	\$0	\$0	\$0	\$0	\$72	\$228	\$527	\$3,084	\$1,229	\$0	\$5,139	\$6,620	2031
HR	Anacostia Pump Station Improvements Phase II	2025	Ongoing	\$0	\$0	\$0	\$0	\$144	\$200	\$907	\$2,421	\$0	\$0	\$0	\$0	\$3,672	\$4,700	2028
HV	Bryant Street Pump Station - Spill Header Flow Control	2013	Ongoing	\$15	\$189	\$513	\$2,936	\$2,097	\$12	\$0	\$0	\$0	\$0	\$0	\$0	\$5,746	\$8,253	2026
JB	Bryant Street PS Improvements - Phase II	2012	Ongoing	\$0	\$336	\$1,201	\$4,772	\$166	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$6,475	\$12,185	2025
LT	Water System SCADA	2014	Ongoing	\$243	\$1,590	\$1,512	\$2,065	\$722	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,889	\$8,406	2025
LU	Water Facilities Security System Upgrades 2	2016	Ongoing	\$0	\$131	\$410	\$606	\$352	\$240	\$0	\$0	\$0	\$0	\$0	\$0	\$1,740	\$2,000	2026
OR	Fort Reno Pump Station Improvements Phase II	2023	Ongoing	\$0	\$0	\$220	\$290	\$1,078	\$3,486	\$16	\$0	\$0	\$0	\$0	\$0	\$5,091	\$6,430	2027
OW	Water System Sensor Program (WaSSP)	2022	Ongoing	\$0	\$757	\$754	\$721	\$648	\$648	\$648	\$648	\$648	\$0	\$0	\$0	\$4,825	\$5,600	2028
PS	Existing Water Facilities Building Optimization	2023	Ongoing	\$0	\$0	\$95	\$509	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$604	\$695	2024
S6	West Venturi Meter - Bryant Street Pumping Station	2023	New	\$0	\$0	\$3	\$116	\$352	\$898	\$527	\$0	\$0	\$0	\$0	\$0	\$1,897	\$2,404	2027
<b>TOTAL PUMPING FACILITIES BUDGETS</b>					<b>\$538</b>	<b>\$3,581</b>	<b>\$4,765</b>	<b>\$12,016</b>	<b>\$5,559</b>	<b>\$5,484</b>	<b>\$2,171</b>	<b>\$3,297</b>	<b>\$527</b>	<b>\$3,084</b>	<b>\$1,229</b>	<b>\$41,711</b>	<b>\$73,904</b>	



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DDOT		Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion
B0	B0 FY 2010 - DDOT Water Projects	2010	Ongoing	\$4	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	2021
BN	FY 2011 - DDOT Water Projects	2011	Ongoing	\$5	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	2021
CJ	FY 2012 - DDOT Water Projects	2008	Ongoing	\$42	\$473	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$473	\$6,474	2022
CM	FY 2013 - DDOT Water Projects	2012	Ongoing	\$0	\$458	\$110	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$568	\$1,549	2023
<b>TOTAL DDOT BUDGETS</b>				<b>\$51</b>	<b>\$931</b>	<b>\$110</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,041</b>	<b>\$8,023</b>	
STORAGE FACILITIES		Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion
FA	Water Storage Facility Upgrades	2009	Ongoing	\$4,178	\$532	\$2,718	\$716	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,965	\$37,933	2024
HW	Rehabilitation of Elevated Water Tanks	2023	Ongoing	\$0	\$0	\$179	\$729	\$847	\$1,954	\$1,240	\$504	\$0	\$0	\$0	\$5,453	\$7,000	2028
MA	Saint Elizabeth Water Tank	2002	Ongoing	\$77	\$1,539	\$541	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,080	\$47,511	2023
MQ	2MG 4th High Storage Tank	2004	Ongoing	\$158	\$156	\$133	\$889	\$778	\$0	\$0	\$0	\$0	\$0	\$0	\$1,956	\$9,741	2025
MR	2nd High Water Storage	2009	Ongoing	\$0	\$14	\$109	\$77	\$895	\$2,295	\$6,650	\$1,596	\$0	\$0	\$0	\$11,636	\$17,043	2028
QG	Anacostia First and Second High Storage	2019	Ongoing	\$0	\$404	\$1,133	\$5,818	\$1,131	\$464	\$1,259	\$5,170	\$788	\$0	\$0	\$16,167	\$19,171	2029
RX	Water Storage Facility Upgrades Phase II	2026	New	\$0	\$0	\$0	\$0	\$0	\$163	\$377	\$1,877	\$2,348	\$3,241	\$2,211	\$10,217	\$17,800	2036
<b>TOTAL STORAGE FACILITIES BUDGETS</b>				<b>\$4,413</b>	<b>\$2,645</b>	<b>\$4,813</b>	<b>\$8,229</b>	<b>\$3,651</b>	<b>\$4,876</b>	<b>\$9,526</b>	<b>\$9,147</b>	<b>\$3,136</b>	<b>\$3,241</b>	<b>\$2,211</b>	<b>\$51,475</b>	<b>\$156,199</b>	
PROGRAM MANAGEMENT		Start	Status	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total	Lifetime Budget	Completion
KV	Water Program Management Services 2F	2020	Ongoing	\$3,455	\$4,591	\$4,544	\$2,770	\$831	\$0	\$0	\$0	\$0	\$0	\$0	\$12,737	\$30,610	2025
LB	Water Program Management Services 2G	2025	Ongoing	\$0	\$0	\$0	\$0	\$3,090	\$5,120	\$7,542	\$7,080	\$4,641	\$1,551	\$0	\$29,025	\$35,480	2030
ME	Water System Program Management Services	1999	Ongoing	\$7	\$316	\$315	\$301	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$932	\$19,854	2024
NU	Water Program Management Services 2H	2030	New	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,090	\$5,120	\$8,210	\$35,480	2035
<b>TOTAL PROGRAM MANAGEMENT BUDGETS</b>				<b>\$3,463</b>	<b>\$4,907</b>	<b>\$4,859</b>	<b>\$3,072</b>	<b>\$3,921</b>	<b>\$5,120</b>	<b>\$7,542</b>	<b>\$7,080</b>	<b>\$4,641</b>	<b>\$4,641</b>	<b>\$5,120</b>	<b>\$50,904</b>	<b>\$121,424</b>	
<b>TOTAL WATER BUDGETS</b>				<b>\$57,279</b>	<b>\$165,313</b>	<b>\$227,116</b>	<b>\$218,339</b>	<b>\$194,652</b>	<b>\$202,046</b>	<b>\$191,451</b>	<b>\$192,665</b>	<b>\$192,324</b>	<b>\$124,683</b>	<b>\$120,842</b>	<b>\$1,829,430</b>	<b>\$3,167,891</b>	

(\$ in thousands)

	FY 2021	FY 2022 - 2031 CIP Disbursement Plan										Lifetime	
	Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-yr Total	Budget
<b>CAPITAL EQUIPMENT</b>	19,585	40,519	37,021	36,156	35,307	39,671	41,813	36,203	36,203	36,203	36,203	375,302	375,302
<b>WASHINGTON AQUEDUCT</b>	9,588	16,875	59,628	34,749	17,164	27,825	37,122	14,723	11,940	19,831	13,911	253,768	253,768
<b>ADDITIONAL CAPITAL PROJECTS</b>	29,174	57,394	96,649	70,905	52,471	67,496	78,935	50,926	48,143	56,034	50,114	629,070	629,070



Fleet Truck



Fleet Skimmer Boat



WAD McMillan North Clearwell

## Overview

Additional Capital Programs is a subset of DC Water’s Capital Improvement Program (CIP) and is comprised of Capital Equipment and the Washington Aqueduct.

**Capital Equipment** – This category accounts for approximately 60% of the Additional Capital Programs budget and includes capital equipment purchases, refurbishment, replacement and enhancement of operational facilities, vehicle equipment, office renovations, mechanical equipment, and Information Technology (IT) software/hardware needs. The current capital equipment disbursement budget includes the following cluster groups:

- **Wastewater Operations** – This cluster is comprised of Wastewater Operations, Wastewater Process Engineering, and Maintenance Services. The capital equipment activities/purchases support work attributable to rehabilitation, replacement, and continuous improvements or enhancements for pumps, screens, large motors, centrifuges, process control systems, and actuators.
- **Water Operations** – The capital equipment activities/purchases for this department include water service replacements, backflow preventers, hydrant locks, and valve replacements.
- **Pumping and Sewer Operations** – these purchases support Supervisory Control and Data Acquisition (SCADA) hardware, flow meters, major build rebuilds, and sewer equipment.
- **Engineering** – purchases for this department support engineering and technical services miscellaneous equipment needs.
- **Finance and Procurement** – This cluster includes the departments of Finance, and Procurement & Compliance. The activities/purchases are primarily for reserve funds to support additional capital equipment needs for new facilities, unplanned emergencies, and capital equipment requiring long-lead times. This also funds the purchases of payroll time clocks, and miscellaneous finance related equipment.
- **Customer Care** – these activities/purchases support the enhancements, replacements, and upgrades of residential and commercial water meters.

- **Information Technology** – This department is comprised of the following clusters: IT Infrastructure and IT Project Management. The IT activities are for equipment purchases for infrastructure and projects, which include laptops, cabling, radios, servers, telephones, and software applications.
- **Shared Services** – Capital equipment within this cluster is primarily for the departments of Office of Emergency Management, Facilities Management, Fleet Management, Security, and Safety. The activities/purchases include, plumbing, elevators, photocopiers, appliances, furniture, vehicles, loaders, dump trucks, vacuum trucks, boats, backhoes, cranes, trailers, forklifts, fire suppression system equipment, renovations, cameras, utility carts, and sensors.

**Washington Aqueduct** – The Washington Aqueduct, managed by the U.S. Army Corps of Engineers (USACE), provides wholesale water treatment services to DC Water and wholesale customers in Northern Virginia, (Arlington County and Fairfax County Water Authority). DC Water purchases approximately 74 percent of the water produced by the Aqueduct’s two treatment facilities, the Dalecarlia and McMillan Treatment Plants, and thus is responsible for approximately 74 percent of the Aqueduct’s operating and capital costs. Under federal legislation and a memorandum of understanding enacted in 1997 and updated in 2013, when Fairfax Water replaced the City of Falls Church, DC Water and the Aqueduct’s wholesale customers in Northern Virginia inherited a much greater role in oversight of the Aqueduct’s operations and its Capital Improvement Program, than prior to 1997.

The USACE, in accordance with Federal procurement regulations, requires DC Water to remit cash in an amount equal to the total project cost in advance of advertising contracts, and these funds are transferred immediately to a USACE/U.S. Treasury account to be drawn down during the execution of the project, through completion, with no interest going to DC Water. Over the years, extensive discussions with the U.S. Office of Management and Budget (OMB) and the USACE resulted in a proposal in the President’s FY 2006 and FY 2007 budgets that would allow Aqueduct customers to deposit funds for any projects required by their National Pollutant Discharge Elimination System (NPDES) permit (including the residuals project) to a separate escrow account, allowing the Aqueduct customers to retain interest on these funds. The proposal was submitted in May 2006 to the Senate and House. During FY 2006, the USACE briefed the Senate Environment and Public Works Committee staff and in conjunction with DC Water, briefed the Senate Homeland Security and Government Affairs committee staff. Additionally, DC Water and Washington Aqueduct staff provided DC Delegate Norton’s office with the Administration’s proposal. Neither committee acted on the proposal.

The Washington Aqueduct continues to pursue other options that would be more favorable to DC Water, including transferring dollars on a phased basis, utilizing taxable bonds, or taxable commercial paper. In the past, some of these options have not been viewed favorably by the U.S. Treasury, but we will continue our outreach efforts to Congressional staff, federal agencies, and the USACE on this critical issue.

DC Water’s share of Washington Aqueduct’s infrastructure improvements to achieve established service levels for FY 2022 – FY 2031 is \$253.8 million. The increased investments funds Washington Aqueduct’s risk-based asset management CIP, except the following projects: Federally Owned Water Mains, Travilah Quarry Acquisition Outfitting, and Advanced Treatment.



# Additional Capital Programs

summary overview financial plan rates&rev **capital** financing departmental glossary

(\$ in thousands)

	FY 2021 Actual	FY 2022	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	10-Yr Total
<b>WASTEWATER OPERATIONS</b>												
810006	Wastewater Operations	\$0	\$50	\$50	\$50	\$50	-	-	-	-	-	\$200
812003	Wastewater Process Engineering	\$0	\$400	\$400	\$500	\$400	-	-	-	-	-	\$1,700
811003	Maintenance Services	\$1,194	\$4,000	\$4,000	\$4,000	\$4,000	-	-	-	-	-	\$16,000
	Subtotal	\$2,035	\$6,215	\$6,215	\$6,315	\$6,215	-	-	-	-	-	\$24,960
<b>WATER OPERATIONS</b>												
813003	Water Operations	\$45	\$800	\$1,050	\$775	\$775	-	-	-	-	-	\$3,400
813012	Water Quality and Technology	\$0	-	-	-	-	-	-	-	-	-	\$0
	Subtotal	\$45	\$800	\$1,050	\$775	\$775	-	-	-	-	-	\$3,400
<b>PUMPING AND SEWER OPERATIONS</b>												
815000	Pumping Services	\$840	\$1,765	\$1,765	\$1,765	\$1,765	-	-	-	-	-	\$7,060
814000	Sewer Operations	\$27	\$235	\$210	\$210	\$210	-	-	-	-	-	\$865
	Subtotal	\$27	\$235	\$210	\$210	\$210	-	-	-	-	-	\$865
<b>ENGINEERING</b>												
801000	Engineering & Technical Services	\$36	\$25	\$25	\$25	\$25	-	-	-	-	-	\$100
	Subtotal	\$36	\$25	\$25	\$25	\$25	-	-	-	-	-	\$100
<b>FINANCE &amp; PROCUREMENT</b>												
300003	Finance, Accounting & Budget	\$18	\$10	\$10	\$10	\$10	-	-	-	-	-	\$40
300003	Reserve Fund	\$0	\$5,202	\$10,776	\$11,459	\$10,757	\$36,638	\$38,780	\$33,170	\$33,170	\$33,170	\$246,292
	Subtotal	\$18	\$5,212	\$10,786	\$11,469	\$10,767	\$36,638	\$38,780	\$33,170	\$33,170	\$33,170	\$246,332
<b>CUSTOMER CARE</b>												
600018	AMR Replacement	\$126	-	-	-	-	-	-	-	-	-	\$0
600018	On-Going Replacement	\$616	\$2,900	\$2,900	\$2,900	\$2,900	\$3,033	\$3,033	\$3,033	\$3,033	\$3,033	\$29,801
600018	SDWM Meter Program	\$0	179	200	200	200	-	-	-	-	-	\$779
	Subtotal	\$743	\$3,079	\$3,100	3,100	\$3,100	\$3,033	\$3,033	\$3,033	\$3,033	\$3,033	\$30,580
<b>INFORMATION TECHNOLOGY</b>												
601003	IT Infrastructure	\$2,910	\$2,910	\$3,349	\$2,672	\$2,672	-	-	-	-	-	\$11,603
601012	IT Project Management	\$8,872	\$7,770	\$3,520	\$3,145	\$3,145	-	-	-	-	-	\$17,580
	Subtotal	\$11,782	\$10,680	\$6,869	\$5,817	\$5,817	-	-	-	-	-	\$29,183
<b>SHARED SERVICES</b>												
204000	Facilities Management	\$1,600	\$2,168	\$1,966	\$1,845	\$1,798	-	-	-	-	-	\$7,778
205003	Security	\$1,377	\$1,407	\$800	\$600	\$600	-	-	-	-	-	\$3,407
202006	Fleet Management	\$1,924	\$10,648	\$6,000	\$6,000	\$6,000	-	-	-	-	-	\$28,648
201006	Office of Emergency Management	\$0	\$50	\$0	\$0	\$0	-	-	-	-	-	\$50
	Subtotal	\$4,901	\$14,273	\$8,766	\$8,445	\$8,398	-	-	-	-	-	\$39,883
<b>TOTAL CAPITAL EQUIPMENT</b>		\$19,585	\$40,519	\$37,021	\$36,156	\$35,307	\$39,671	\$41,813	\$36,203	\$36,203	\$36,203	\$375,302
<b>WASHINGTON AQUEDUCT</b>		\$9,588	\$16,875	\$59,628	\$34,749	\$17,164	\$27,825	\$37,122	\$14,723	\$11,940	\$19,831	\$253,768
<b>TOTAL ADDITIONAL CAPITAL PROGRAMS</b>		\$29,174	\$57,394	\$96,649	\$70,905	\$52,471	\$67,496	\$78,935	\$50,926	\$48,143	\$56,034	\$629,070



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